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PAPERS

OF THE

PEABODY MUSEUM OF AMERICAN ARCHAEOLOGY
AND ETHNOLOGY, HARVARD UNIVERSITY

VOL. XIV.—No. 1

THE STALLING'S ISLAND MOUND
COLUMBIA COUNTY, GEORGIA

BY

WILLIAM H. CLAFLIN, JR.

SEVENTY-TWO PLATES AND ONE ILLUSTRATION
IN THE TEXT

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Excavations lower end of Stalling's Island Mound; Trench 1, extreme left foreground; Trench 2, foreground; Trench 3, middle background.

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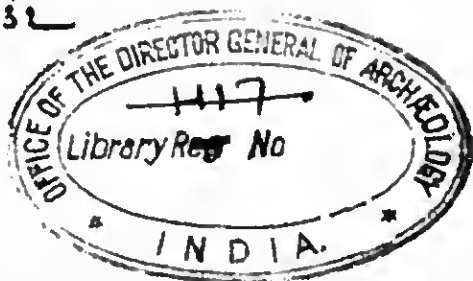
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THE STALLING'S ISLAND MOUND; COLUMBIA COUNTY, GEORGIA

THE SITE

LOCATION

SOME eight miles above Augusta, Georgia, and just below the dam recently constructed in connection with a hydro-electric power plant, the Savannah River flows by a series of islands for approximately a mile. Here, Big Stevens empties into the Savannah from the Carolina shore. Before the construction of the dam, the river ran through a mild, boulder-strewn rapid just above the first islands. A half century ago one of the first large islands of the Savannah was known as Stalling's Island. Today the upstream end of this island is a little more than a stone's throw from the dam, and the name "Stalling's" has long since given way to "Indian Island," so named because of the large mound which is the subject of this report. (See map, Plate 2.)

DESCRIPTION

The mound, which occupies the approximate center of the island, is masked by thick woods which line the shores. Elliptical in shape, the mound measures along its major axis 512 feet, with a maximum width of 300 feet. The average elevation of the mound is 23 feet above the normal level of the river. From the northwest the mound rises gradually, widening as it progresses, until it reaches a height of 30 feet, its maximum elevation. On top, the surface is approximately level. As the top of the mound has been cultivated several times, any small depressions or elevations which originally might have existed have been obliterated. The southwestern side is wooded and precipitous; the southeastern and northeastern sides slope more gradually. How much erosion has altered the original shape of the mound is hard to determine. There is no evidence that the mound has ever been completely

submerged. The flood in March, 1929, which was only a few feet below the record "high water," washed well up the sides, completely covering the rest of the island, but the main portion of the mound stood well above the current. Presumably the action of floods has caused the gradual leveling of the upstream end, while recent floods have cut big gashes into the northeastern slope. With the exception of the gashes made by the freshets on the northeast side, which have all occurred during the past six years, there have been no visible changes made by the Savannah in the mound during the past twenty-three years. However, the excavations just completed have destroyed such large areas of the protective covering of wire grass that in all probability large sections of the mound will be washed away during the next few years and eventually the mound on Stalling's Island will be completely carried away by the Savannah (Plate 3).

PREVIOUS REFERENCES

The only references to the mound on Stalling's Island are in the works of the late Col. C. C. Jones, Jr. Both in his "Antiquities of the Southern Indians" (pages 197-200), and in his "Monumental Remains of Georgia" (pages 13-22), Col. Jones gives us a beautifully written eulogy of this "monument to the dead," full of sentimentality, pathos, and atmosphere, but lacking in details of what he found and how he found it. He does, however, give us the following information in his "Monumental Remains of Georgia."

"Several pits have been opened in the northeastern end. At the depth of twelve feet the amount of shells was undiminished. They appear to have been distributed in layers of eight or ten inches in thickness with intervening strata of sand. An examination into the contents of the mound proves conclusively that it must have been used only for burial purposes, that it is in fact a huge necropolis.

"It could not have been the work of a year or of a generation. Strata upon strata have been heaped, each covering the dead of its age, until by degrees and with the lapse of time (how long, who can tell?) it grew into its present surprising dimensions.

"Skeletons abound. One of them in particular—in reclining

posture — lny with the head to the north, the palms of the hands resting against either cheek. From the wrists and neck were taken numerous shell heads, which, when strung, filled a thread nine feet in length. Interesting pipes of steatite and axes of cyanite were also exhumed. Interspersed in every direction appeared fragments of pottery. No traces of incineration could be perceived, nor were any specimens of metallic construction ascertained to exist."

Col. Jones likewise makes the interesting statement that the shells were used as a covering of the mound to insure its permanence. "The use of the shell as a covering for their tumuli was not infrequent among the Indians who inhabited the coast regions of our State, their object apparently being with the aid of this material, almost indestructible as it is by natural elements, to impart a permanency to the graves of their dead."

That certain of the deductions made by Col. Jones, some of which are quoted above, were founded on insufficient evidence and are incorrect will be shown in this report. The traces of his excavations made in the 1850's are still visible, and are indicated by the letter J (Plate 3).

EXCAVATIONS

It was the eloquent eulogy of the mound on Stalling's Island by Col. Jones in his "Antiquities of the Southern Indians" that led the writer when a boy to make his first visit to Stalling's Island in the spring of 1906. Ever since, he has had a constant interest in it and an ever present desire to know more about the information it contained. Many visits were made to the mound as years went by. Some work was done, but not enough to justify a report, until the winter of 1929 when Mr. and Mrs. C. B. Cosgrove of the Peabody Museum of Harvard University carried on extensive excavations.

The first excavation, scarcely worthy of the term, was made during the winter of 1908. Two days were spent with the aid of three negroes digging a trench some 10 by 7 feet to a depth of 5 feet (Plate 3, C1). A thick layer of shells covered the surface, followed by black loam intermixed with shells, food bones, potsherds and other evidences of occupation. At approximately

4 feet, a tough reddish clay discouraged further digging. Two burials were found, enough to stimulate interest for further work. Although several visits were made to the mound during the following years, no excavations were attempted until April, 1921. During the fifteen years from the first visit until 1921, no visible changes had taken place, except that the surface had been cultivated once during this period. A week was spent on the mound and with the aid of eight negroes the excavations C2 and C3 (Plate 3) were made. In general, the same conditions were found in C2 as in C1; a well defined shell layer on the surface, thinning out, however, towards the southeast, followed by black loam intermixed with refuse, and finally, at a depth varying from $3\frac{1}{2}$ to $4\frac{1}{2}$ feet, the tough base of clay. A small hole was sunk into the clay to a depth of 12 feet below the surface. Nothing was found which would indicate that the clay was artificial. C3 again revealed the same general conditions, the shell layer in the western half of the trench being much more compact and thicker, in places nearly 2 feet thick (Plate 4, b). One burial was found in C2, while four were grouped near together in C3.

Four years went by before any more work was done. In March, 1925, seven workmen were employed for five days in the digging of Trench C4, which was some 20 by 7 feet. The clay base dipped sharply towards the northwest. At the eastern end the clay was within $3\frac{1}{2}$ feet of the surface, while at the western end of the trench it dipped to a depth of $8\frac{1}{2}$ feet. Five distinct layers of shell cut across the western face, the lowest layer resting on the clay, while the upper was a continuation of that found in C3 (Plate 4, a).

The above excavations were all made by the writer and might be considered as of a preliminary nature compared to the extensive work carried on by Mr. and Mrs. C. B. Cosgrove during the winter of 1929.

This final expedition was under the auspices of the Peabody Museum of Harvard University, Mr. and Mrs. C. B. Cosgrove of the Museum staff being assigned to direct the work. Their skilful direction of the work and carefully prepared field notes, together with the material they collected, make this present report possible. The Cosgroves arrived at Augusta on December 28, 1928, and remained until March 1, 1929. Many rainy days

hampered the work. From fourteen to sixteen laborers were employed.

At first a trench 40 feet long (Plate 3, Trench 1) was dug along the base of the northeastern slope. Erosion had already washed away a considerable part of the side of the mound at this point. Practically a solid mass of shells, containing much refuse, extended to a depth of 7 feet, 9 inches, where the first shells deposited rested on undisturbed clay intermixed with river silt (Plate 5, b). Evidently the bed of an old river channel or "flood wash" had been filled with the refuse thrown from the top. It was decided that too much time would be expended continuing the face of this trench up the side of the mound, following along the clay base, but in order to determine the stratification, a small trench was continued up the side. This trench was also driven straight into the mound sufficiently far to disclose a clear section of undisturbed clay. The northwestern face of this small trench was practically a solid mass of shells. Five distinct layers were easily traced, following the slope of the mound until they were fused into a solid mass at the base. Here again the first shells deposited rested upon the clay. The line of this trench was continued across the mound by digging what might be called a survey trench, Trench 2, 6 feet wide, and carried to the depth of the clay (Plate 5, a). Once completed, this preliminary work disclosed a cross section of the surface above the clay (Plate 6). Although the loam was intermixed with shells and other refuse there was no well defined shell layer covering the middle section of the mound. As seven burials were uncovered during this work, and as all indications pointed towards nothing existing in the clay base, it was decided to cut a 60 foot face across the mound just southeast of the preliminary trench, the depth of this face to follow the clay base. This was done with excellent results. No defined shell layer covered this section of the mound. The average depth of the shell and loam deposit was 4 feet. Numerous burials, storage pits, fireplaces, and many artifacts were uncovered.

In order to get information about other sections of the mound, Trench 5, 4 feet wide, was started at the southeastern base and continued over the top of the mound until it joined the main work. The southeastern side of the mound was covered with

shells, a thick deposit at the base thinning out as it neared the top. No well defined shell deposit was uncovered once the trench reached the top (Plate 6).

A small trench, Trench 3, was pushed up and over the north-eastern side, some 60 feet above the main working. A thick deposit of shells covered the sides and surface at this point. The clay base contained a considerable admixture of sand.

Finally, Trench 4 was started from the northwestern slope, continuing up the gradual incline existing here, and widening out as it neared Col. Jones' old workings. The shell deposits were meager until well on top. The clay mixed with sand was within $1\frac{1}{2}$ feet of the surface along the slope. Interesting results were obtained from this work.

It will be seen from referring to Plate 3 that the excavations outlined above are sufficiently comprehensive to determine the stratigraphy and general features of construction. In addition, they uncovered many burials, much miscellaneous material, and other interesting data that will be taken up in this report.

THE STALLING'S ISLAND MOUND

FORMATION OF THE MOUND

THE excavations described above definitely established that the mound is a natural elevation of tough yellow clay left by the cutting of the Savannah River, the clay at the northeast, or upper end, being overlaid by a mixture of sand and clay, this sandy clay ranging in depth from 1 foot to 1 foot 6 inches.

On top of this natural clay hill is a cultural deposit of black loam, shells, and refuse. This cultural deposit filled up the undulation of the natural hill and spread over the sides with such uniformity that a comparatively symmetrical mound was formed, giving it every appearance, at first glance, of being entirely artificial.

The cultural deposit varies in depth, as may be readily seen from the cross section map (Plate 6). The variation as a rule, however, is not more than a foot, the clay generally being encountered between 3 and 4 feet of the surface. Only one place was uncovered where the clay base varied markedly from the average. At the western end of Trench C4 the cultural refuse reached the depth of 8½ feet. The clay dips sharply from about the middle of this trench. Presumably there was a natural pocket in the original clay hill at this point, which offered a convenient place for the dumping of refuse.

At first it seemed difficult to attribute this covering of the mound to the accidental work of man, but the continued study of this deposit eliminated any doubts. It was impossible to discover a square foot of this covering layer that did not contain numerous testimonials in the form of charcoal, food bones, potsherds, discoloration, storage pits, shells, etc. This interesting cultural deposit is the result of a long period of occupation by one tribe, who for convenience will be called Stalling's Island people. After this main period of occupation, other tribes visited the island and lived on the mound. These later people did not stay sufficiently long to build up any cultural deposit of their own, possibly only using the mound as a convenient camp site while on fishing expeditions. However, they did leave potsherds, a few artifacts, and several burials as sufficient proof of their presence. No data

were obtained which would even justify a guess as to how many years this refuse layer was in the making. The deposits of shell in themselves are sufficient evidence of long periods of occupation. The sides of the mound are covered with layers of shells, as well as a considerable portion of the mound itself northwest of Trench 2. Although innumerable shells are scattered throughout the cultural deposit covering the southeastern portion of the mound, there is no well defined shell layer until nearing the sides, when gradually definite layers take shape, increasing in thickness as they spread over the sides. It is only natural that the occupants of the mound threw their refuse over the sides, thus surrounding their house site with vast masses of these food shells. The largest deposit of shells was encountered while digging Trench 1. As the period of occupation continued, in certain places several distinct layers of shells resulted. Two layers are shown in the photograph taken at the northeast end of Trench 2 (Plate 8, a), where the side of the mound has suffered considerably from erosion. Another photograph taken of the eroded face, 20 feet above Trench 2, shows the extent of the shell deposits at that point (Plate 8, b).

Other proofs of a long period of occupation are the numerous burned areas, fire pits, and storage pits. Twenty-four fireplaces of various kinds and one hundred and ten pits were uncovered, their location being shown on the detail map of the excavations (Plate 7. See also the cross section map, Plate 6).

It will be noted that no pits are shown in the areas excavated previous to the main expedition. Pits were encountered during this preliminary work but no accurate locations were recorded, therefore none are shown.

Fire hearths, small burnt areas, and fire pits were found in the clay and at all levels above it throughout the excavations, indicating clearly the continued occupation as the accumulation of refuse grew. A photograph of the fire pit 7 feet southeast of stake 3A is given on Plate 9, a. The bottom of this pit was 3 feet 9 inches below the surface and penetrated the clay base. It measured 1 foot 10 inches in diameter and was 10 inches deep. The sides were plastered smooth with clay and were burned a brick red. A few food bones were found in the layer of ashes covering the bottom of the pit. Another fire pit, 21 feet 3 inches east of

stake 9A and just east of pit 12, differs from the above in that it rested on a shell stratum. The bottom of this pit was 2 feet 9 inches below the surface, and was oval, with diameter of 1 foot 9 inches and 2 feet 6 inches, and 1 foot deep. The fire in this pit had solidified the shells beneath into a rock-like consistency 3 to 4 inches thick. Food bones were scattered throughout the black soil fill of this pit. In some cases old fireplaces were marked only by beds of ashes or charcoal, and sometimes by both.

The storage pits were circular and ranged from 1½ feet to 5 feet in diameter. Some were cut deeply into the clay, while others only left a shallow impressioo, the main portion of the pit being in the refuse above.

Presumably these pits were originally made for storage places and were later filled with refuse. In several cases later pits overlapped earlier ones. The fills of these pits ranged from clear black soil to heavy accumulations of shells, food bones, ashes, and charcoal. Several pits had burned areas above the bottom and showed evidence of fire burning along the sides. This was particularly noticeable in pits 1, 2, 3, 32, 82, and 99. As some of the pits were filled with clear shell, it might be possible that they were used as ovens to bake this form of food. A possible explanation that suggests itself in respect to the pits with burned bottoms and sides is that fires were built in them to dry the ground preparatory to filling them with the winter supply of food. By the examination of the contents these pits were made both by the Stalling's Island peoples and by the tribes living on the mound after the main occupation. Some pits contained only sherds of the later wares. To give a description of all the pits would entail too much repetition, but it seems well to give the complete field notes on several.

Pit 2. Four feet east of stake 6A. Bottom, 6 feet below surface. Cut into clay 3 feet. Diameter 3 feet 3 inches. East side of pit burned to a brick red. Fill: black soil with shell, food bones, and charcoal. Remarks: four sherds of Stalling's Island pottery.

Pit 7. Just east of Pit 2. Bottom, 4 feet below surface. Cut into clay 1 foot. Diameter 1 foot 6 inches. Fill: black soil with shells and food bones. Remarks: four large stones chinked with smaller stones and two pieces of a net sinker covered the bottom.

Pits 2 and 7 are shown in Plate 10, a.

Pit 8. Two feet south of stake 6A. Bottom, 6 feet 5 inches below surface. Cut 3 feet into clay. Diameter 3 feet by 3 feet 6 inches. Burned area over fill of pit 1 foot 4 inches above bottom. Fill: black soil with ashes, charcoal, food bones, shells, pieces of net sinkers, typical Stalling's Island sherds, and one bone tool.

Pit 9. Overlapping 1 foot on west side of Pit 8. Cut into clay 1 foot 3 inches. Diameter 2 feet 6 inches. Fill: black soil with charcoal and food bones.

Pit 11. Ten feet south of stake 10A, 4 feet below surface. Cut into clay 1 foot 9 inches. Diameter 2 feet 9 inches. Fill: black soil containing food bones, shell, and potsherds of the Stalling's Island type. One large sherd lying on bottom of pit. Also, five arrow points and four bone tools were on bottom of pit. A bed of ashes and a burned stratum of shell 4 inches thick were 1 foot 8 inches above bottom.

Pit 21. Adjoining Pit 19. Four feet south of stake 9B, 4 feet 6 inches below surface. Cut into clay 2 feet. Diameter 4 feet. Fill: black soil containing charcoal, shells, food bones, typical Stalling's Island sherds, 1 complete and 2 broken net sinkers, 7 crude stone points, 1 piece of worked bone, 3 bone awls, 1 broken hammerstone, part of a banner stone and a flint tool.

Pit 70. Seven feet west of Stake 5C. Bottom, 3 feet 6 inches below surface. Cut into clay 10 inches. Diameter 5 feet 7 inches. Fill: black soil containing shells, 7 broken stone points and very few food bones. Pit contained Skeleton 35. On north side was a small circular pit 1 foot 6 inches in diameter, sunk 4 inches into bottom.

Pit 76. Ten feet 2 inches north of Stake 7N. Bottom, 4 feet 6 inches below surface. Cut into clay 5 inches. Diameter top of pit 4 feet. Diameter bottom of pit 5 feet 3 inches. Pit cut through black soil and shell. Fill: 1 foot 3 inches below surface a 1 inch stratum of charcoal, just below charcoal a 1½ inch stratum of ashes, 2 feet below ash stratum a thin layer of clay burned red. The remainder of the fill consisted of soil and shell. Remarks: above and in the charcoal stratum was a great quantity of turtle and deer bones and potsherds, none of which were Stalling's Island types. Among the sherds were three large urn rims, one of which was paddle-marked (Plate 30, lower). It will be seen from the above notes that Pit 76 is of later origin, having been sunk through

the cultural refuse left by the Stalling's Island people. The presence of the three urn rims and paddle-marked sherds is additional evidence of its later origin.

Pit 108. Nine feet 3 inches south of Stake 6A. Bottom, 7 feet 4 inches below surface. Cut into clay 4 feet. Diameter 3 feet. Fill: black soil containing charcoal ashes, food bones, shells, and Stalling's Island sherds. Stratum of ashes 1 foot 3 inches below top of clay and another stratum of ashes 9 inches below first stratum. A photograph of Pit 108 appears in Plate 9, *b*. Cutting into this pit is a rectangular fireplace 2 feet 6 inches by 3 feet. The fire pit penetrated 1 foot 7 inches into the clay. The sides and bottom were burned red, the bottom fill of this fire pit being clear sand with black soil above.

MATERIAL CULTURE

HOUSES

THAT the majority of the shelters were grouped along the center of the mound is evident by the distribution of the fireplaces and storage pits. Due to the danger from floods, any shelters built on any other part of the island must have been of a very temporary nature. Therefore, it seems logical that the extent of the village was at all times limited to the top of the mound. Unfortunately no post holes or impressions of timbers set into the soil were found which might serve as aids in forming any idea of the possible shape and size of the shelters used by the Stalling's Island Indians. It seems most likely that if posts or timbers were used in house construction their outlines would have been left in the firm black loam, and particularly in the hard clay below. We are entirely in the dark concerning the question of the type of shelter, the lack of more definite information pointing to flimsy shelters, probably of bark or matting.

FOOD

That the Stalling's Island peoples had a large variety of food was continually evident throughout the excavations. The large quantities of deer bones found are proof that this animal was sufficiently plentiful to be considered an important part of their diet. The bones of the coon, turkey, rabbit, squirrel, fox, and beaver also were found scattered throughout the refuse, but were by no means as plentiful as those of the deer. No buffalo or bear bones were found.

Sturgeon and gar fish were eaten, as is also proven by the existence of quantities of their bones. Presumably other small fish were caught, but their bones have disappeared through decay. Turtle bones and shells were found quite frequently. Fresh water clams and mussels were two of the main staples of diet as evidenced by the large deposits of these shells.

Two caches of burned corn cobs were found, giving proof that this grain was in use. The ears are small, scarcely any of them

reaching a length of 3 inches. Probably other types of seeds, together with berries, nuts, and wild fruits were used as food, but no traces of them remain.

POTTERY

Although only four complete vessels were recovered, the large number of sherds found throughout the excavations affords ample material for an interesting study, over thirty-five hundred sherds making up the collection.

The pottery of Stalling's Island falls into two very distinct divisions. First, the pottery made by the people who lived for a long period of time upon the mound and whom, for convenience, we have called "Stalling's Island people," and second, the pottery left from time to time by later visitors who came after the main period of occupation. The pottery of the Stalling's Island people is distinctive and unlike any types of Southeastern ware hitherto described, while the second division is to a large extent made up of the common Southeastern types. Not only are the sherds of the Stalling's Island pottery distinctive in appearance, but all the sherds of the second group were found near the surface or in grave fills and pits that were of later origin than the main period of occupation. In short, these two main classifications are separated by stratification as well as by their marked difference in appearance.

Unfortunately, no whole or even partially broken Stalling's Island vessels were found, although, as stated above, the large quantity of sherds affords ample material for study. It is interesting to note that more sherds were found per square foot in Trench 1 than in any other section of the mound. The depth of the heavy shell refuse at this point shows clearly that the occupants of the mound were in the habit of throwing their refuse over the side, and naturally broken vessels found their final resting place here in larger quantities than elsewhere. As Trench 1 progressed in depth, however, after reaching 3 feet, fewer and fewer sherds were found until none appeared in the final shell layer which rested on the undisturbed clay and silt.

Insufficient area was uncovered at this depth to allow the presumption that the people who left the first shell deposit did not

possess pottery. In all probability they did, but to a lesser degree than did later generations. There was no difference in the texture or design of the Stalling's Island type sherds wherever found, almost identical designs being found at the depth of 6 feet in Trench 1 as occurred within 6 inches of the surface. Stratification gives no evidence of the development of this interesting type. From the information at hand it starts and ends without improvement or change, and its origin is left for future expeditions to solve. At present it stands as a distinctive type restricted to Stalling's Island and eight other sites, all within a radius of six miles.

A great majority of the sherds indicate clearly that they are fragments of large howls. Reconstruction of rim fragments indicates an average diameter of 16 inches. Only a few vessels had diameters less than 8 inches, while some were around 20 inches. Reconstructing the depth of the original vessels is more difficult, due to the lack of sufficiently large sherds. Seven inches seems to be the average, and many of the large bowls with flaring rims do not reach this depth by an inch or two.

The walls may be characterized as thick and rather soft. The average thickness is $\frac{3}{4}$ inch, with many sherds measuring over $\frac{7}{8}$ inch. The thinnest walls do not measure less than $\frac{1}{8}$ inch.

The paste used in the manufacture of these vessels was of a poor quality, some of the sherds being almost porous. The normal color may be called a dull brownish gray, but firing has resulted in a range of colors from brick red to black.

Tempering of some sort exists in about sixty percent of the sherds. Grit is the medium which is used almost entirely. The quantity mixed with the paste ranges from a slight spattering, which might have been accidental, to extremely heavy tempering that makes the sherds feel like sandstone. The majority are tempered in moderation, however. Occasionally crushed quartz was used instead of grit, while in a very few cases evidences of pounded mica were found. Traces of grass tempering also exist. Strangely enough crushed shell, so common as a tempering material in Southeastern ware, was not used at all.

The lack of tempering in many sherds and the lack of uniformity of its use when existing lead to the supposition that the

art of tempering was at a low stage of development among the Stalling's Island people.

There are no sherds that show without question a coiled method of construction. However, there are enough indefinite signs to prevent a definite statement that this method was not known. It seems expedient to say that it was not in common use and possibly was not used at all.

It is highly improbable that a slip was ever applied to the outside of a Stalling's Island vessel. A few sherds might be questioned in this respect. The change in the surface, which gives rise to doubts, presumably was caused during the firing, the surface later being rubbed down. Rubbing was used much more extensively on the inside than on the outside of the vessels. No attempts to get a real polish were made. Paint, as a medium of decoration, was not used.

The above is an attempt to describe briefly certain general characteristics of Stalling's Island pottery. The most distinctive features, however, are the rims and design. Out of more than twelve hundred fragments of rims examined only two showed the slightest tendency to curve outward; all the rest are straight or incurving. This is in striking contrast to the rims found during the excavation of the Nachoochee Mound in White County, Georgia, carried on by the Museum of the American Indian, Heye Foundation. Here, only one fragment of incurving rim was found. Taken as a group, the rims of Stalling's Island vessels were not the subject of elaborate decoration. On some otherwise plain vessels rough scratches occur just below the rim, while only a very few sherds show what might be called true rim decoration. However, the design on many sherds varies to a certain degree as it nears the rim. The application of the rim as a separate strip of clay was not practised, although in a few cases it appears as if clay had been added here and there to reinforce the original rim. Plate 11 shows a series of rim cross sections: — *a*, *b*, and *c* represent the forms of straight rims; *d*, with the instanting lip, although not common, occurs sufficiently often to be included in the series. Nearly all of this type have rough scratches or definite cuts on the surface of the lip. *e* to *l* complete the series and show the extreme development of the incurving rim. Presumably these cross sections are from fragments of bowls. A ridge or shoulder

at the point where the incurving begins is almost universal. There seems to have been no attempt to smooth down this ridge, in fact the reverse seems to be the case, the ridges even being made more pronounced.

In conclusion, the distinctive feature of the Stalling's Island rims is that they curve inward, and the accentuated shoulder may be considered a secondary characteristic.

The decoration on Stalling's Island pottery is unique and differs entirely from any of the repeated forms of decoration occurring on Southeastern ware. With the exception of rough scratches, the decoration is punctate. With the aid of a small implement, possibly only a stick, the potter punched the desired pattern into the soft surface of the vessel. As a rule, line after line of the impression of the tool in hand covers the surface of the vessel, the impressions often so near together that they form little corrugated trenches. Sometimes the individual taste of the potter varied the direction of the corrugated trenches so that more complicated patterns resulted.

A representative series of Stalling's Island sherds is shown on Plates 12 and 13. Plates 14 and 15 give the types of plain and roughly decorated sherds, the decoration taking the form of scratches or shallow depressions haphazardly applied. In Plate 16 are examples of the very fine punctate design. This form of design was not in common use, only a comparatively few sherds having this form of decoration. That this fine punctate design was used in conjunction with what might be called the characteristic Stalling's Island form of decoration is shown in Plate 16, *a*. Another variation of design takes the form of dots, circles, and half moons (Plate 17).

Plates 12, 13, 18, 19, and 20 are devoted to what has been referred to above as the characteristic Stalling's Island designs. Blank spaces were sometimes left on the sides of the vessels, thus breaking the continuity of pattern, as shown by the sherds on Plate 18. The scratched method of decoration shown in Plate 15 was likewise used with the typical punctate design, as shown in several sherds in Plate 13. Reference has been made to the variation of design as it neared the rim. This is brought out by the sherds in Plate 19, the same method of decoration existing, but with a change in arrangement. Although the straight line

application of the "little corrugated trenches" is by far the most common form, they were occasionally applied in curves, as in Plate 20.

Many sherds of the characteristic Stalling's Island punctate have so much in common that in looking at a number of sherds, several might seem to be from the same vessel, but in only two instances was this found to be true.

It seems strange that no whole vessels were found. Is it possible that the Stalling's Island people never practised the custom of burying pottery with the dead? All the evidence in hand points in this direction, and seems fairly conclusive, considering the number of burials found.

In conclusion, it is interesting to note that the characteristics of the Stalling's Island pottery are so positive that out of the 3500 odd sherds less than a half dozen are sufficiently doubtful as to make classification difficult. In short, it is a distinct and separate ware readily definable from all the other types of Southeastern pottery.

LATER POTTERY

To describe and classify the pottery left by the peoples who lived on the mound from time to time after the main occupation is a more difficult task. As all the sherds of this second group were found near the surface, in intrusive pits, or in grave fills, it was impossible to obtain stratigraphic data. The total number of sherds from this second group is likewise comparatively small, approximately three hundred pieces comprising the collection. It might be sufficient to say that they represent all the common forms of Southeastern ware, but a more detailed description seems due, particularly since Southeastern pottery is still very much of a problem and since much needs to be done before a chronological classification is perfected. Many of the types of this second group are so distinctive, not only in design, but likewise in texture, that it seems unlikely that they all may be attributed to the same people.

It is interesting to note that nearly all the types of this second group were also found during the excavation of the Nachoochee Mound. To quote from the report on the Nachoo-

chee Mound, issued by the Museum of the American Indian, Heye Foundation, page 56; "It may be remarked that every variety of pottery found (with the exception of the painted effigy jar) in both shape and ornamentation was gathered at all levels of the mound, suggesting that the occupants manufactured all the types of earthenware throughout the occupancy of the site. The ware is of the typical Southern Appalachian form and style, in no particular respect different from that of other pottery made by the Cherokee in early times."

Two urn burials furnished the only entire vessels found. In each case a large paddle-marked urn contained the remains of an infant, while howls covered the mouths of the urns. In one case the bowl was inverted; in the other it was upright. A photograph of the urn and howl with Burial 68, before being removed, is shown in Plate 21. The urn (Plate 22) contained Skeleton 39. It is decorated with a curved paddle-stamped design, and is 18 inches high, with a diameter of 16 inches. The howl (Plate 23) covered the above urn, being placed over the mouth in an upright position. It is undecorated and measures 8 inches in height, with a diameter of 16½ inches. Both are excellent specimens of the type of vessel used in urn burials throughout the southern Appalachian area, as described by W. H. Holmes in his "Aboriginal Potters of the Eastern United States," pages 38 and 133.

The large fragment of a paddle-marked urn, Plate 24, was found 1 foot 9 inches below the surface, covering the remains of an infant (Skeleton 32). The design is almost identical to the large urn described above. In the case of the above and the four vessels making up the two urn burials, the tempering material is grit.

Paddle-marked sherds, representing both straight line and curve designs, are shown in Plates 25 and 26. The rosettes, shoulder, and knob, figured respectively in *a*, *b*, and *d*, Plate 25, were all put on the vessels as separate pieces.

The four upper sherds, Plate 26, are examples of the griddle-like stamped decoration, while the two lower sherds were presumably decorated with a wheel rather than a paddle, the design to be repeated in this method being carved on a cylinder, rather than on a flat surface.

The sherds in Plate 27, and the partially restored pot (Plate 28) were decorated by means of a textile- or string-wrapped paddle. The upper right-hand sherd shows no overlapping and might have been made in a finely woven basket. The sherd, however, is sufficiently small to have been covered by one stroke of the paddle. There is unmistakable evidence on several of the textile-marked sherds that the coiled method of manufacture was in use. The sherd in Plate 29 shows clearly that the vessel of which it was a part was either made inside a coarse string bag, or a coarse string textile was pressed into the soft clay surface before firing. The impression of the fabric is so strong and uniform that it seems most likely that the vessel was fastened inside a textile mold. Unfortunately, the sherd is not large enough to prove conclusively that this was the case. On this sherd we have the only clear imprint of a fabric.

Before leaving the stamped decorated ware we may notice three interesting urn rims found in Pit 76 (Plate 30). Although this pit is described elsewhere, it is well to note here that these three rims were found together, 1 foot below the surface. The paddle-marked sherd is tempered with grit, while the two pinch-handed rims are tempered with crushed shell. With the exception of one textile-stamped sherd, none of the paddle-stamped sherds are tempered with shell, the tempering being primarily of grit, with a few exceptions where crushed mica was used. On the other hand, all the sherds in Plate 31 showing examples of the indented rim band are tempered with shell. The band on sherds *a* and *b* have been put on as a separate strip, while on all the rest, and this applies to the great majority, the rim band was made by pinching up the body of the vessel. Red is the predominating color of the sherds of this type, although a few are cream colored, presumably the result of difference in firing rather than in the paste. In all cases the paste is soft and fine, differing materially in texture from that used in the paddle-stamped wares. The evenness of fractures indicates the coil method of manufacture. The pinched band under the rim is sometimes found on a paddle-stamped vessel.

It is of interest that these two varieties of ware, namely, (1) the paddle-stamped, grit-tempered, and (2) the indented rim band, shell-tempered wares, are found associated together at Stalling's

Island, Nachoochee, and at several other sites along the Savannah River above Augusta. This, however, is not the case with the pottery from the village sites below Augusta. In the author's collection there are over one hundred sherds from the village site on the banks of the Savannah at Silver Bluffs, Aiken County, South Carolina, some five miles below Augusta. Here we find the paddle-stamped, grit-tempered ware without a trace of the indented rim band, shell-tempered ware. Sherds bearing the griddle-stamped pattern are numerous at Silver Bluffs. In addition to the various stamped patterns (curved, straight line, textile, and griddled) there are a number of sherds having the rough brush-like scratchings similar to those shown in Plate 32. Likewise, a collection of sherds from the village site on the bluffs at New Savannah, some twenty miles down the Savannah River from Augusta, tell the same story, namely, the presence of paddle-stamped, grit-tempered ware, without any indented rim, shell-tempered sherds.

There is substantial evidence that both types under discussion were in use by the Cherokee in early historic times. Due to the evidence supplied by the sherds from Silver Bluffs and New Savannah, and the fact that paddle-marked pottery is found along the coast of Georgia, in northern Florida, and other fringes of the known Cherokee country, it is suggested that perhaps the Cherokee conquered several of these tribes which used the stamped ware, amalgamated the remnants of these tribes into their own, and thus fused the two types, the indented rim, shell-tempered type being the true Cherokee pottery.

Plate 32 gives examples of sherds with a roughly scratched pattern, as mentioned above. This effect might have been attained, and probably was, by some sort of crude brush. In this type we find shell- and grit-tempered sherds, the grit greatly predominating. At both the Silver Bluffs and the New Savannah sites "feet" from pots having this scratched design were found. In the grave fill of Skeleton 18 there were several sherds with this scratched design, including six "feet." Plate 33 shows three of them together with several other sherds from the grave fill of Skeleton 18.

A distinctive class of ware, not described as having been found at Nachoochee, is shown in Plate 34. As a rule this ware is thick and very heavily tempered with coarse grit. As will be seen by

referring to the above plate, shallow lines and small punctates were used as decorations. The distinctive feature of this ware, except for its "hubbly feel," is the cord marking on the top of the rim, a small cord having been pressed across the top of the rim again and again. Every rim fragment of this ware found has the cord markings.

In the author's collection there are several pots from Coosowattee Old Town in Murray County, Georgia. The texture is identical but the Coosowattee pots lack the cord markings. There were not enough sherds found at Stalling's Island to presume that the cord markings on the rim are prevalent, nor is it proper to judge the type from the four pots in the author's collection. The texture is so similar, however, it is proper to suggest that this variety has a definite connection with the sites at Coosowattee Old Town.

Plate 35 shows three pieces that are foreign to the Savannah River Valley. The fragment of a bottle, the sherd from a "boat-shaped dish," and the fragment from the neck of another larger bottle presumably had their origin farther to the west or southwest. This suggestion is made with the reservation that they might have been left by the peoples who built the Hollywood Mound, near the banks of the Savannah River, some 12 miles below Augusta. Here similar objects were found.¹

Finally, we have in the pottery from Stalling's Island a distinctive type well defined by stratification and running very true to type, and a variety of wares generally referred to as typical south Appalachian pottery. Is it not likely that in the years to come sites will be explored in which several, if not all, of these wares will appear as definitely separated from the rest as the Stalling's Island pottery is now definitely established as a distinctive type?

BONE OBJECTS

The people inhabiting Stalling's Island made extensive use of bone for the manufacture of various articles, as evidenced by the large number of bone objects found throughout the excavations. Nearly five hundred articles of bone were found, many being still in the process of manufacture, ranging from the first rough cut-

¹ (See the *Annual Report of the Bureau of Ethnology*, 1870-1, page 217.)

ting on an antler to the finished product. No segregation of types occurred either in certain sections of the mound or with the burials. The most common materials used were the leg bones and antlers of the deer.

Before taking up the various types in detail, it seems fitting to reconstruct the method of manufacture as nearly as we can from the large quantity of material obtained from the subjects. In the fabrication of tools from antlers, naturally the first step was to cut off the prong. In the majority of cases the prong was cut off at the base. However, a few examples of worked antlers show that it was cut off some 2 inches from the main horn (Plate 36). A roughly sawed groove is the first sign of working. Other grooves were then made until the prong was circled by a series of grooves. This process was continued until the outer horn was cut through, making it possible to break off the pithy inside section of the antler without danger of splitting. In some cases the final cutting was evidently done with a small chisel-shaped object, the marks of such a tool existing on the hard covering of the antler just outside the pithy center and extending into the pithy core. There are no examples of the core being clearly cut, the custom evidently being to break off the desired portion when all possibility of splitting was removed. Once the prong was severed from the antler the workman concentrated on shaping the point to its desired form. Here again, if a blunt, rounded end for, let us say, a flaker was desired, the workman made small rough cuts, continuing this process until the tip was severed. As the pithy core does not extend into the tips, the sawing process, helped out occasionally by blows delivered on the base of a small chisel, had to be continued until the bone was completely cut in two. The roughly cut point was then shaped by scraping and rubbing. A hafted beaver's tooth might readily have been used for this purpose. The final shape was attained by rubbing, presumably on sandstone or some similar substance. After the working end of the tool was completed, the workman finally finished the base by cutting away the rough edges and submitting it to a rubbing process. The same principle was applied to the manufacture of hafts from the main stem of the antler; that is, the end into which the tool was to be inserted was finished before any other work was done.

Much the same principle applies in the manufacture of objects from material other than antlers. If a split food bone was to be made into an awl, the point was carefully finished before any attention was paid to the rest of the object. It was evidently the practice to choose a section of split bone approximately the right length and work it down, beginning at the point, to its desired shape. There is no evidence of sawing the base, all unfinished objects having a roughly broken butt. The finishing of awls and needles was accomplished by scraping and rubbing, some sections of bone occasionally being split off before the rubbing stage.

In conclusion, the workman of Stalling's Island in shaping a bone tool first made sure that the bone could be made into the desired tool before spending time unnecessarily in finishing. The tools that he worked with were simple; a chipped knife hafted or unhafted, a piece of sandstone, and a small chipped scraper, presumably hafted, which could be used as a chisel.

Piercing Tools. The largest number of bone articles found can be classed under the general heading of piercing tools, which may be subclassified into awls and needles. In Plate 37, a-d, is shown the common form of awl made from the metapodine of the deer. This type is common throughout the United States and Canada. The Cliff-dweller made use of this particular bone to fashion his awls as did the prehistoric Indian living along the St. Lawrence River. Their uses undoubtedly were varied. C. C. Willoughby, in describing similar articles found in the Indian village site and cemetery near Madisonville, Ohio,¹ states that "they were used as bodkins and perforators, likewise in basket making and for many other purposes." Presumably, when in use, many of these awls were hafted in bone or wooden sockets.

In Plate 37, e and f represent a slightly different type. They were found with Burial 13, and are made from the tarsal bone of the turkey. The ulna of the deer was likewise used for the manufacture of a perforator, or awl, which presumably was used in heavier work. The type shown in Plate 37, o, is found in many sites throughout the United States. It was not in common use by the Stalling's Island people, only five such awls being found. The rest of the objects in Plate 37 are more delicate, some possibly being used as pins rather than perforators; h is the only perfo-

¹ Hooton, 1920.

rated example found and may be classified as a needle; *k*, *l*, and *m* have decidedly nail-like heads. Although this type is comparatively rare, it was found with burials as well as scattered throughout the refuse. It seems very likely that these "button"-ended perforators were used as pins, probably for personal adornment. This conclusion is based upon the fact that nearly all are polished and are in certain cases decorated. Several decorated examples are shown in Plate 38. The design is painted on *b*, *c*, and *e*. The color is now a glossy light cream, still distinct, but probably much faded. The other examples are decorated with finely etched lines. It seems most probable that these objects were used as pins worn in the hair or elsewhere as ornaments.

Flakers. A very complete collection of the antler tools used in the manufacture of chipped implements was recovered. A slight description of how these antler tools were made has already been given. Chipping tools fall under two main classes: punches and pressure flakers. The punches, *a*, *b*, and *c*, Plate 39, were generally held in place and then struck sharply on the end, while the flakers *d*, *e*, and *f*, were pressed against the object to be chipped, the pressure flaker being used in more delicate chipping. Undoubtedly many of the rough stone implements were completed without the use of the flaker. George Catlin in his "Last Rambles," pp. 184-185, describes the uses of these implements among the Apaches. The following is quoted from the more recent observations on the subject by Saxton T. Pope in describing the Yahi method of making an obsidian arrowhead ("Yahi Archery," p. 116).

"A boulder of obsidian was shattered by throwing another rock on it. The chunks thus obtained were broken into smaller size by holding a short segment of deer bone or piece of bone against a projecting surface and smartly striking it a glancing blow with a stone. The resulting flakes of obsidian best suited for arrowheads were roughly three inches long and $1\frac{1}{2}$ inches wide and $\frac{1}{2}$ inch thick. Selecting one of these—he began the flaking process—.

"The flaker was a piece of deer horn bound to a stake about a foot long. Holding this instrument securely in his right hand—he pressed the point of the horn against the obsidian edge with vigour and fractured or flaked off a small hit."

Undoubtedly the functions of these tools overlapped, the pressure flaker sometimes being used as a punch, and vice versa. The flakers from Stalling's Island differ from the more common type found in Ohio and elsewhere in that the working end is rubbed down into a blunt chisel edge. The effects of use, taking the form of slight abrasion and splinters, exist almost entirely on the two ends of the chisel edge. The small tool, Plate 39, *g*, might either have been used as a punch, or possibly was hafted and used as a flaker. The ends of punches show clearly the effects of the blows struck during the flaking process.

Before leaving the subject of chipping tools it is interesting to note that John Smith describes their use as follows: "His arrow head he quickly maketh with a little bone, which he ever weareth at his breast, of any splint of a stone or glass in the form of a heart and these they glue to the end of their arrows." ("History of Virginia," Richmond, 1819. Vol. 1, p. 132.)

Hafts. The large numbers of hafts which were in daily use in a prehistoric Indian village is easily imagined from the quantities of chipped knives that come from village sites. Comparatively few hafts, however, are ever found. This is undoubtedly due to the fact that wood was largely used for this purpose. Bone hafts made from antlers were also in use by the Stalling's Island people. Plate 39, *h* and *j* are presumably knife hafts made from the main prong of the antler, while *i* and *k* were set, most probably, bone awls or possibly small stone scrapers.

Blunt Tools. Plate 40 shows a series of rounded and chisel edged tools; *a* and *b* are chisel edged and probably were used either as gouges to cut away charred wood, etc., or in dressing skins. There is no evidence of any blows ever having been struck on their bases, nor is it likely that they were ever hafted. Warren K. Moorehead in his "Stone Age in North America," Vol. II, Figure 551, pictures similar objects from the site of a Mandan village in North Dakota, and claims them as bone celts. It is obvious that the two articles in question could not stand being put to any very heavy usage. Both have many small horizontal scratches across the face of the cut portion of the bone. These scratches must be the result of the rubbing while making the tool, rather than from use. The working edges of the rest of the tools shown on this plate are rounded and would have been of no use as gouges or chisels;

d, like the awl figured in Plate 37, is made from the ulna of the deer. It, together with the rest of the round ended objects, might have been used by their original owners in weaving coarse mats, or in working skins.

Arrowheads. Only a few arrow points made from antler tips were found. Plate 41, *d* and *e*, shows two still in the process of manufacture. In both examples the point has been rubbed down to approximately its desired form and the base drilled to admit the shaft. The final work of cutting off the base on *d* had been well started (note the groove encircling the point). Several examples of carefully finished spearheads made from the femur of the deer were found (Plate 41, *e*). The bases of these points were carefully drilled. Whether or not *h* is a spearhead is doubtful. This object is a nicely polished bone cone and seems too blunt to have been of much service on the end of a spear.

Hooks. Only two examples of fishhooks were found throughout the work. Plate 41, *g*, is a finished hook, found with Burial 13; *f*, a fishhook in process, came from the general diggings. Bone fishhooks are widely scattered over eastern and central United States. Moorehead¹ pictures a series of fishhooks, both complete and in process of manufacture, from Ohio, as well as identical specimens from a Mandan village site in North Dakota.

Another type of hook, Plate 41, *a* and *b*, offers an interesting problem. Two examples of *a* were found, while *b* is the only one of this particular kind. Possibly they were used in the fabrication of fish nets. C. C. Moore reports finding similar hooks and states they were used in net making.

Two polished and decorated deer jaw bones were found together in a refuse pit. They are both practically identical in finish as well as design. Plate 41, *i* and *j*, shows both sides of one of them. It is most probable that they were whistles. A hole penetrates into the slit from the small end, and with the addition of a clay plug inserted at the proper place in the slit a whistle is the result. The entire surface has been polished, and a rough design scratched as indicated. These two jaw bones were the most interesting bone articles found.

¹ Moorehead, 1910.

SHELL OBJECTS

All the shell objects recovered were found associated with burials. With one exception, a conch shell drinking cup, the articles were for use as personal ornaments. It seems rather strange that there was not a larger use of shell; eight strings of beads, three gorgets, three ear plugs, and the conch shell drinking cup comprise the entire collection.

Beads. The various types of beads are shown in Plates 42 and 43. Plate 42, *c*, a string of eighty-three cylindrical beads, made from the whorl of the conch shell, were found around the neck of Skeleton 37. They are uniform neither in size nor shape, ranging from $\frac{1}{8}$ inch to 1 inch in length, and in diameter from $\frac{1}{8}$ to $\frac{3}{8}$ inch. The general type represented by this string is common through the Savannah River Valley, and in fact throughout the entire Southeast. Plate 42, *b*, shows a string of small cylindrical beads which were around the neck of an infant, Skeleton 13. All indications point to this burial as being one made by the later people. Plate 42, *a*, is made up of small barrel-shaped beads, averaging in length $\frac{1}{2}$ inch and in diameter $\frac{1}{4}$ inch, and comparatively uniform in shape. These beads, comprising a string over 10 feet long, were found scattered among the bones of Skeletons 69 and 70. They are not a common type. Plate 43, *a* and *b*, were found with burials C4 and C6, respectively. As these burials were unquestionably of individuals of the Stalling's Island culture due to their position under undisturbed refuse layers, these beads can be considered a true Stalling's Island type.

These discoidal beads have a striking resemblance to the beads worn today by the Navajo and other tribes of the Southwest. Many are less than $\frac{1}{16}$ inch in thickness, while a few measure only $\frac{1}{32}$ inch. The smaller, *b*, averages $\frac{1}{8}$ inch in diameter, while *a* runs between $\frac{1}{2}$ and $\frac{3}{4}$ inch. Two other strands of similar beads, not illustrated, were found with burials of the early inhabitants of the island. The short string (Plate 43, *c*), composed of exceptionally well made cylindrical beads, was found with Skeleton C7. Unfortunately there is sufficient doubt surrounding this burial to prevent the absolute statement that it is a burial of Stalling's Island culture. All the indications at hand, however, point in that direction. A small string of discoidal beads with slightly rounded

edges (Plate 43, *e*) accompanied Skeleton 18, a burial which, judging from the type of potsherds in the grave fill, was of the later period.

The three ear plugs, Plate 43, *d*, previously mentioned, are of perfect workmanship and were found beside the skull of Skeleton C8.

Gorget. Plate 43, *f* and *g*, shows the two perforated shell disks made from the conch shell which were with the burial of an infant (Skeleton 32) placed under half a paddle-marked urn. These two disks can be regarded as once belonging to the later inhabitants of the island.

Plate 44 shows the most striking article of shell found, a gorget, 2 $\frac{7}{8}$ inches in diameter, made from the conch shell and carved in a unique manner. It is also interesting to note that it was found with Skeleton 69, one of the few bundle burials. Whether this is the work of the original inhabitants of the island is not certain.

The conch shell drinking cup, already mentioned, was found with Skeleton 13. It is a fairly large conch with the whorls carefully cut out, but with no attempts at decoration. Similar objects were found at Nachoochee and likewise have been found in many parts of the southeastern states. Jones¹ states, "the use of certain conches as drinking cups seems to have been general among the Southern Indians."

STONE OBJECTS

The study of the stone material again establishes certain definite Stalling's Island culture types, chipped objects and soap-stone net sinkers comprising an overwhelming majority of the stone objects found. Excluding these two classes, the collection is surprisingly small considering the extent of the area covered.

Banner Stones. Banner stones, ranging from the unfinished stage, through perfect specimens, to broken pieces, were more numerous than any other classes of rubbed stone objects. In only three cases were they associated with burials, the remainder, over sixty pieces, being found throughout the general diggings. Due to their location among the refuse of strictly Stalling's Island culture, all types represented were in use by the original inhabitants of the island.

¹ Jones, 1872.

It will be seen by referring to the plates that the types run from a cylindrical form flattened on one side (Plate 45, *a*, *b*, and *c*), through a square variety (*e*, *f*, and *g*), to the more common winged or butterfly variety (Plates 46 and 47). It is interesting to note that the three banner stones found with burials were of the cylindrical variety, Plate 45, *a* and *c*, showing two of the ones so found: *c* is an especially interesting specimen as it is made from a material very similar to catlinite, highly polished and of excellent workmanship; *a* was found in the center of a bundle burial, not being discovered until the mass of bones was broken apart; *b* is still in the unfinished state, the drilling just sufficiently far advanced to leave a slight core. *d*, another unfinished specimen, is of rather unusual shape for the Savannah River district. It is interesting that while the winged type is common throughout the Savannah River Valley within a radius of fifty miles of Augusta, the finds of the cylindrical and square types are more localized along Kiokee and Uchee Creeks, Columbia County, Georgia, and along the banks of the Savannah River in their vicinity. In the collection of the late Col. C. C. Jones there are over thirty of this variety, all catalogued, from the above named locality.

Two large unfinished winged banner stones were found, Plate 46, *a*, being the larger and measuring $8\frac{1}{2}$ inches in diameter. The pecking process was well towards completion, the owner evidently being engaged in making the cut between the two wings when the work was discontinued. A fragment of another unfinished banner stone, two drawings of which are given in Plate 46, *b* and *c*, shows clearly the drilling in process. That a reed, sand, and water were being used to make the hole is evident by the core. In every case where the drilling is incomplete, a core gives testimony of the method used. Plate 47 shows fragments of several winged banner stones. No complete specimen of the winged variety was found, although by far the largest number of fragments were from this type.

Unlike their pottery, the Stalling's Island people do not have a distinctive type of banner stone confined only to their culture.

Grooved Axes. Like the banner stones, the collection of grooved axes shows that several types were in use. Although only eighteen axes were found, ranging from perfect specimens to small fragments, examples of three types are present. Plate 48, *a* and *b*,

shows excellent specimens of the common form of full grooved axe with rounded edges; *b* shows considerable wear and has been sharpened. The second type, *c*, a three-quarter grooved axe with one flat edge likewise shows considerable wear. *e*, an imperfect specimen, is of the third type, having a three-quarter groove in the form of a square channel, and with both edges flattened. *d* and *f* are crude examples of the full grooved type, *f* being the only axe associated with a burial. It was found in the grave fill of Burial 45, a few inches above the skeleton. In all probability it was a mortuary offering. With the exception of this axe, all the rest were in refuse of unmistakable Stalling's Island culture.

Again referring to the report on the Nachoochee Mound, it is of interest to compare the two sites, for not one grooved axe was found there. On the other hand, ten celts were recovered at Nachoochee while not the slightest fragment of a celt was found at Stalling's Island. It seems likely, considering the amount of cultural refuse worked over, that if celts were in use by the Stalling's Island peoples, traces of them would have been found. Celts can be classed as one of the more common objects found along the banks of the Savannah. In the author's collection there are over seventy-five that were found within a radius of fifteen miles of Stalling's Island. Col. C. C. Jones¹ likewise refers to the large number of celts found along the Savannah. The absence of celts at Stalling's Island is one of the many interesting features of this site.

Discoidal or Grinding Stones. Only nine specimens comprise the collection of this class of objects. From the lack of care given to their finishing it seems probable that they were used as grinders rather than gaming stones. This condition applies to all the specimens with the exception of Plate 49, *d*. This particular discoidal was the only one found with a burial. It lay just above the bowl covering the urn burial (Skeleton 39), and from its position was undoubtedly a mortuary offering. As the urn was paddle-marked, this discoidal, which is made of quartz and is carefully shaped, belonged to the later people and in all likelihood was used in the game of "chunkee." *a* and *c*, likewise made of quartz, were found in undisturbed Stalling's Island culture refuse. They lack sufficient symmetry and perfection of finish to lead one to

¹ Jones, 1873.

believe that their use was utilitarian rather than for gaming. *e*, made from horn stone, is more carefully finished and might be classed as a gaming stone. However, from the comparatively few specimens found, the absence of any highly finished stones, together with the absence of any of the smaller variety of discoidals, it seems probable that the Stalling's Island people did not use discoidals for gaming, but as grinders.

Mortars. As the *mano* is suited to the flat, shallow metate of the Southwest, so is the round grinding stone of the Southeast suited to the saucer-like mortars. Plate 50 shows one of the four mortars found at Stalling's Island. The circular depression 5 inches in diameter and $1\frac{1}{2}$ inches deep at the center is made in a roughly squared piece of granite.

Five round stone balls, ranging from $1\frac{1}{2}$ inches to 2 inches in diameter were found. None were associated with burials. Plate 49, *b*, is of quartz, while *f* is of horn stone, with a slight depression at one base of its major axis. Four out of the five balls found had this depression. Stones of this general size and shape were used by the Plains Indians as club heads, being incased in cowhide and fastened to a stick. This seems a logical use to attribute to the ones found at Stalling's Island.

Pitted Stones. Pitted stones were comparatively numerous, scattered throughout the refuse deposits, the majority being made from roughly shaped lumps of soapstone (Plate 51, *b* and *e*, showing examples of this type). Only five were found to be made from water-worn pebbles (*a* and *c*). The pits on these natural stones were caused by pecking, each stone having two such pits, one on either side of the flat surface. The pits in the soapstone examples show signs of having been gouged out. This naturally would be the case, as this material lends itself easily to this method of working. Several of the soapstone specimens have three pits, while one has five. There is no indication that these small depressions were ever used as rests for drills. Any such use would have left telltale marks on the soft material. All the surfaces of the pits are rough.

Net Sinkers. Two types of net sinkers were scattered throughout the cultural deposits in great numbers. The first type, rough soapstone lumps, either natural or crudely shaped, encircled by a groove (Plate 51, *d*, *f*, *g*, *h*, and *i*), were by no means as numer-

ous as the flat perforated type, as shown on Plate 52. That both of these classes of objects were used as net sinkers seems the most logical explanation of their existence in such large quantities, over 2500 of the flat perforated variety being found. In some cases considerable care was used in the manufacture of this latter type, and in one case, Plate 52, lower left-hand corner, the owner had applied decoration. This variety averages one half inch in thickness. In some cases the perforation shows the effects of wear, giving the impression of having been suspended from a thick cord. It seems strange that the Stalling's Island people preferred the perforated kind of net sinker, when the grooved variety needed much less work to make and presumably gave the desired results.

These types of net sinkers are by no means confined to the Stalling's Island peoples, but were in general use along the Middle Savannah River Valley. On page 337 of his "Antiquities of the Southern Indians," Col. Jones states: "Of the sinkers there are two varieties, perforated and notched. All the perforated sort that I have ever seen, with one exception, were formed either of soapstone or of clay. Consisting generally of flat or rounded pieces of soapstone, irregular in shape, they vary in weight from scarcely more than an ounce to a pound and upward. The perforations are from $\frac{1}{4}$ inch to 1 inch in diameter and are indifferently located either in the center or near the edge. These sinkers abound along the banks of the Savannah River above Augusta. Near the confluence of Great Kiooke Creek and the Savannah River an extensive kitchen refuse pile was cut in two and laid bare some years since by a heavy freshet. Hundreds of these perforated and notched sinkers were there unearthed, showing the great quantities manufactured and used by the natives at this point."

Unfortunately, the large village site at the mouth of Great Kiooke Creek has been completely obliterated by the ravages of the Savannah River. From an examination of the articles from this site in the collection of the late Col. Jones, now in the writer's possession, there is no evidence that this site was ever occupied by the Stalling's Island peoples.

Plate 53 shows a rectangular slab of soapstone and two net sinkers in process. The slab, as well as the net sinkers, shows clearly the marks of chiseling, some of the shallower cuts possibly being made with a flint knife. The slab is one of two such objects

found together. It measures 7 inches by 5 inches by 1 inch. Whether or not the intention was to manufacture net sinkers from it is problematical. The two unfinished net sinkers were found in a cache together with three other unfinished specimens.

Miscellaneous. In Plnte 54 are shown several objects that do not readily lend themselves to classification. *a* and *d* are too small to be unfinished banner stones. They are both made from a comparatively soft, reddish stone and show the effects of rubbing on the ends, caused by use rather than during manufacture. When wet and rubbed on the skin a slight reddish stain is left. Possibly they were used for this purpose. The use of *b* and *c* is very doubtful. They are made from slate, and are the shape of a flattened cigar with a small groove cut around the center. Four of these objects were found, all broken, *b* being in the best condition. *e*, *f*, and *g* are all made from soapstone, *e* possibly being used as a net sinker, but is too carefully made to warrant such classification. The groove shows the long continued wearing of a cord, which has worn a depression into the reverse side where no groove was cut. *f* and *g* are carefully finished and perforated pieces of soapstone, one side of *g* being broken. Possibly they were small banner stones.

Gorgetts. Only three gorgets were found (Plate 54, *h*, *i*, and *j*). They are of plain designs common to the Savannah River Valley. *h* and *j* are of slate, while *i* is of soapstone.

Pipes. Not the slightest trace of a pipe was found. It seems almost certain that if the Stalling's Island people had pipes, one fragment at least would have been found. Considering the large area worked over, the statement that the Stalling's Island people did not have pipes is justified. However, Col. Jones states in his "Monumental Remains of Georgia" that pipes were found at Stalling's Island. The logical conclusion is that he uncovered several burials of the later peoples. That the makers of paddle-stamped pottery had pipes is certain and it seems almost equally certain that the Stalling's Island people did not have either pottery or stone pipes.

Chipped Implements. Scattered throughout the entire excavated area chipped implements occurred in large quantities, over five thousand such objects comprising the final collections. The large numbers of chipped artifacts are in striking contrast to

the dearth of rubbed stone material. It is difficult to visualize to what use such great numbers of chipped implements were put in the daily life of the Stalling's Island people. Only a very few points were small enough to justify their use as arrowheads, many too crudely fashioned to be of any service whatsoever as the point of a weapon, with the possible exception of being attached to a long arrow for shooting fish. Possibly the atlatl was in extensive use and many of the points $1\frac{1}{2}$ inches to 3 inches in length were attached to atlatl darts. Every stage of manufacture is represented in the collection and the fact that these articles were made in quantities on the mound is evidenced by thousands of chippings. Slate was the commonest material used, three objects of slate being found to one of any other material. As a whole, the chipping can be characterized as crude, although naturally there are exceptions where great care in finishing was exercised. Comparatively few chipped implements were found with burials, not more than thirty being mortuary offerings.

The collection is extremely interesting, not only from its basic uniformity of type but likewise by the utter absence of several of the common forms found in large quantities along the banks of the Savannah nearby. As in the case of the pottery we have the definitely established Stalling's Island chipped implement types, established again by stratification, as well as types that can be attributed to the later period of occupation. However, the dividing line is not so definite as with the pottery, there being many more border line cases where final classification is impossible. A more definite idea of the chipped implements can be obtained by referring to the plates. The plates have been arranged in an attempt to give a fair cross section of the articles found rather than to show the more striking specimens.

Plate 55, *a-h*, was selected for the perfection of workmanship as well as type. The square stems of *g*, *h*, *i*, *k*, *l*, may be called the characteristic Stalling's Island stem, while the concave base on the stems of *e*, *f*, *j* is a variant from the straight form and is less common, although occurring in hundreds of specimens. The markedly narrowing point in *j* and *k* occurs in many specimens and can be considered another feature, but by no means does it appear in a majority of the specimens. While the square stem may be considered the most characteristic Stalling's Island form,

the rounded stem, as shown in Plate 55, *a*, *b*, *c*, *d*, occurs in hundreds of specimens and may be considered a second type.

In short, there are two main types of Stalling's Island stems; the square, and the rounded, with the square stem having what might be called a subclassification in the concave base variety. The shape of the blades varies somewhat as will be shown in later plates. The objects in Plate 55 vary in length from *i*, 3½ inches, to *e*, 2 inches. All are too large for arrow points. It is more probable that they were used as spear points or knives. It will be noted that *g* and *i* have a strong tendency toward "lopsidedness." In Plate 56 we have eleven examples all showing this tendency. All the forms of stems shown in Plate 55 are represented here. It will be seen that the "lopsidedness" not only takes the form of accentuating one shoulder more than the other, but the blade is one-sided as well. This feature occurs in such a large number of specimens that it seems most unlikely that it is accidental. Here again the question of use arises, and to attribute their use to knives rather than spear or dart points seems more logical.

Variations in shape are shown in Plate 57. The same forms of stems occur, but on objects with much wider blades. *m*, 2 inches long and 1½ inches wide, certainly would not have made a good spear head. It seems most logical to class this shape as a knife. *d*, *i*, *j*, and *k* are among the smallest points found. *i*, the smallest, measuring 1½ inches in length, might possibly have been fixed on the end of an arrow. It will be noted that several are "lopsided."

Jasper (Chalcedony) and flint have been the material used for the manufacture of the specimens shown in Plates 55, 56, and 57. It seemed best to segregate the stemmed implements made from slate and quartz on separate plates. As mentioned previously, slate was used much more extensively for the manufacture of chipped implements than was any other material. In general, the slate implements are crude and many are in an unfinished state. In Plate 58 is shown a cross section of the smaller chipped slate implements. It will be seen that all the characteristic stems described previously are represented. In fact, the slate implements are a counterpart of those made of other materials, with the addition that numerous large, clumsy blades were found (Plate 59,

f-m, being representatives of this type). It will be noted that the second row all have the stem with concave base. Plate 59, *a-e*, shows examples in which more care was exercised in manufacture, and their shape is of such a nature, particularly *c*, *d*, and *e*, that their use as spear points is probable. *c*, a decidedly one-sided blade, with rounded stem, was presumably a knife. A few leaf-shaped blades were found, *a* being an example. Again referring to the crude, clumsy blades, it is difficult to visualize their use. Plate 59, *l*, measures 4 inches long and is 2 inches wide at the shoulders. Quantities of such objects were found. Possibly they were used as knives, or were they attached to long arrows and used for shooting fish? It seems wisest to consider their use as problematical.

In Plate 60 are shown sixteen examples of chipped objects made from quartz; *m* and *n* were found as a cache and are in the first stages of manufacture, being only roughly chipped down to their present form; *o* is a peculiarly shaped object, presumably still unfinished, measuring 4 inches long. Its use is decidedly problematical. The rest are characteristic Stalling's Island types, *h* being made from almost clear quartz. The number of chipped quartz objects was surprisingly small when compared with the great numbers of such points found along the banks of the Savannah River in the vicinity of Stalling's Island. They were in the ratio of one to sixteen of other materials, while at some sites, three quartz objects were found for each one of other material. The extensive use of quartz as a material for the manufacture of chipped implements common to most Middle Savannah River Valley sites does not hold true with the Stalling's Island peoples.

Although, as has been stated, the chipped work of Stalling's Island, as a whole, lacks perfection of finish, several objects illustrating excellent workmanship were found, such as the large blade, made from black flint (Plate 61), found with Skeleton 13. It measures 7 inches long, with a maximum width of 2½ inches. Although there is no definite evidence, all indications point to Skeleton 13 as being a burial made by the later occupants of the island. It is extremely doubtful, therefore, that the Stalling's Island people made this beautiful object. Plate 62 shows five additional chipped objects that were also mortuary offerings; *a* and *c*, together with two other points, were found with Burial

C6, while *b*, *d*, and *e* were with the first burial found (C1, April 17, 1909); *c* being a beautifully finished blade of pure white flint, 5 inches long. From the fact that Skeleton C1 was resting in the clay and that a well defined shell layer covered the mound at this point, it seems probable that these objects were made by the original inhabitants of the island.

Before discussing the several types of points left by the later occupants of the mound, it seems best to describe in brief the three plates showing the common form of knives, scrapers, and drills which were used by the Stalling's Island peoples.

Plate 63, *j-m*, a cache of four blades, were found just above the clay layer near the northeastern side of the mound; *k*, the largest, being 6 inches long. It is most likely that their owner intended to devote further work to them, as they are still in a comparatively rough state. Several caches of chipped implements were found, Plate 63, *h* and *i*, showing two of the cache of eleven similar slate knives found in a shell stratum 1 foot below the surface and 3 feet west of Stake 11D; *e*, *j*, and *g* are further examples of the same type likewise made of slate, many of which were found throughout the excavations.

Two additional forms of knives or scrapers are shown in Plate 64; *a-d* have typical Stalling's Island stems, but with a rounded blade instead of a pointed one. *d* once might have been pointed, and, after being broken, altered to its present form. The rest of the objects in Plate 64 are of slate and have a straight cutting edge at the base, that of *f* showing considerable wear. *i* and *l* are still in the process of manufacture. The two main types, as shown in Plates 63 and 64, namely, those with straight base and rounded base, are the typical Stalling's Island knives or scrapers; the stemmed base scrapers, *a-d*, Plate 64, being far less common.

In Plate 65 are shown a few of the many drills found. Approximately one hundred and fifty drills in various stages of completion make up the collection. Several kinds of material were used, the majority of the drills, however, being of slate. All the types shown are common to the Middle Savannah River Valley region and in no way may be attributed to the Stalling's Island culture alone. *k* and *l* are crude slate examples, still unfinished.

It will be seen from the above description of Stalling's Island

culture chipped implements that a marked uniformity of type exists. The typical characteristics of the Stalling's Island chipped objects are so outstanding that in most cases articles of this class left by the later inhabitants of the island stand out at once. It is not only the form but the general "feel" of the objects as well that marks the difference. In Plate 66 are shown eighteen points that are sufficiently different from the Stalling's Island types to warrant attributing them to the later occupants; *p*, *q*, and *r* are outstandingly different in form, while *o*, although made of slate and having a square stem and the general shape of many Stalling's Island points, has serrated edges, which seems sufficient proof that it belonged to the later peoples, as none of the typical Stalling's Island points are serrated. *n*, a similar type of point, was found with Burial 55. Not only the serrated edge but its general shape and workmanship class it with the later period. This is also true of *m*, except that the serrations are lacking. *k* and *l* are not Stalling's Island types but are comparatively common to the region. *i* and *j* are particularly interesting; *j*, made from quartz, is the only perfect example of a concave base point found; *i*, an unfinished point of slate, evidently upon completion would have had a concave base. Two points similar to *i* were found. These four make up the only triangular concave base examples from the hundreds of points found. It might almost be said that only one true example exists, as *i* and the two similar unfinished points might have resulted, when finished, into small scrapers. The dearth of this type of point is interesting, due to the fact that it is a common form throughout the Savannah River Valley. In the author's collection there are over one thousand triangular concave base points catalogued, from a radius of twelve miles of Stalling's Island. Plate 67, *p-s*, shows four of the points mentioned above. It is characteristic of this type of point that the workmanship is usually excellent. Plate 67, *o*, is an example of the "fish tail" variety of concave base point which is common to the region and is missing entirely at Stalling's Island. Again referring to Plate 66, *f*, *g*, and *h* are three additional Savannah Valley forms, comparatively common and not attributable to the Stalling's Island culture. Plate 67, *a-e*, a series of small points, are likewise sufficiently different in form and workmanship to be classed as belonging to the later occupants; *d* is very typical of

the region as are all the rest with the exception of *b*, which resembles more the northwestern Georgia points than those common to the Savannah River. Again referring to Plate 67, we have other common forms of Savannah Valley points, all found adjacent to Stalling's Island, but not occurring there at all; *n*, a slender point with a square stem, although not found in quantities, occurs sufficiently often to be classed as a regional type; *k*, *l*, and *m* are examples of notched points found along the banks of the Savannah. The workmanship of these particular points is decidedly better than the average, nor is this particular type found in large numbers. *h*, *i*, *j* are examples of the common form of beveled point which is found in large quantities in Richmond and Columbia Counties, Georgia, and Edgefield and Aiken Counties, South Carolina. A bevel is produced by chipping from only one side of each edge, so that if a point be held with the tang down, the bevel will be seen along the left edge only. The stems of the three examples shown are characteristic, and in a great majority of this type they have serrated edges. Here again this very common Savannah Valley type is absent at Stalling's Island. *g* is a type of beveled point found in this locality, interesting in that the bevel is always the reverse from that of the common type just described; the bevel when this particular stem occurs always appearing along the right-hand edge. It cannot be classed as a common variety of Savannah River point, but is interesting due to the beveling in the opposite direction from that of the common type. Plate 67, *b-f*, five small points, are all typical of the region and do not occur at Stalling's Island.

In conclusion, Stalling's Island chipped implements (particularly the stemmed varieties) show a remarkable conformity to type. The few intrusive examples of other types — not more than fifty pieces vary from the Stalling's Island forms — in most cases were readily attributed to the later occupants of the island. It is interesting to note that several of the more common types found in large quantities in the immediate vicinity are absent entirely from the island.

ARTICLES OF EUROPEAN MANUFACTURE

Only three articles of European manufacture were found; the neck of one trade bottle, a piece from the neck of another similar bottle, and a piece of glass. Both fragments of trade bottles were of the pre-Revolutionary type, having on the inside an iridescent glaze which flakes off very readily. All three pieces were sufficiently below the surface to remove any possibility of their having been left on the island by some white man many years after the Indians had left this region, the largest piece being found over 4 feet below the surface in Pit 1. The presence of this article of European manufacture so far from the surface was quite disturbing until the presence of the pit was discovered.

All indications point to these bottles as being one of the articles used in the very early trade with Indians of this region. As additional evidence of this fact, there is a complete bottle in the author's collection, the neck being identical to the two fragments described above, which was found in a small burial mound near the Savannah River about half way between Stalling's Island and Augusta. In this particular mound the bottle was associated with objects of stone.

OTHER SITES OF THE STALLING'S ISLAND PEOPLE

MENTION has already been made of the fact that the Stalling's Island people occupied other sites in the vicinity. All are situated on the banks of the Savannah or its tributary, Big Stevens Creek, as will be seen by referring to the map, Figure 1. Shell deposits containing typical Stalling's Island potsherds, chipped objects, and other cultural remains, are sufficient proof that the sites were occupied by the people in question. There is no trace today of Sites 1 and 2, both having been badly damaged by the flood of 1908 and subsequently completely washed away. Site 3, situated at the confluence of the Savannah and Big Stevens Creek, is still plainly marked by the shell deposit covering about a half acre. Site 4, a small shell deposit, containing the characteristic pottery, was nearly destroyed recently by the construction of a new road. Traces of it, however, were still visible in 1928. It is interesting to note that immediately opposite Site 4,

on the other bank of Big Stevens Creek, is another village site, marked by numerous flakes, chipped objects in a finished or semi-finished condition, and potsherds either plain or with paddle-marked design. No traces of shells appear at this site. Site 5, a low shell mound, some 100 feet long by 25 feet across, and with an average elevation of 4 feet, is made up largely of the typical Stalling's Island shell deposit, similar to the shell layers on the mound. Site 6, at the confluence of Fox Creek and the Savannah,

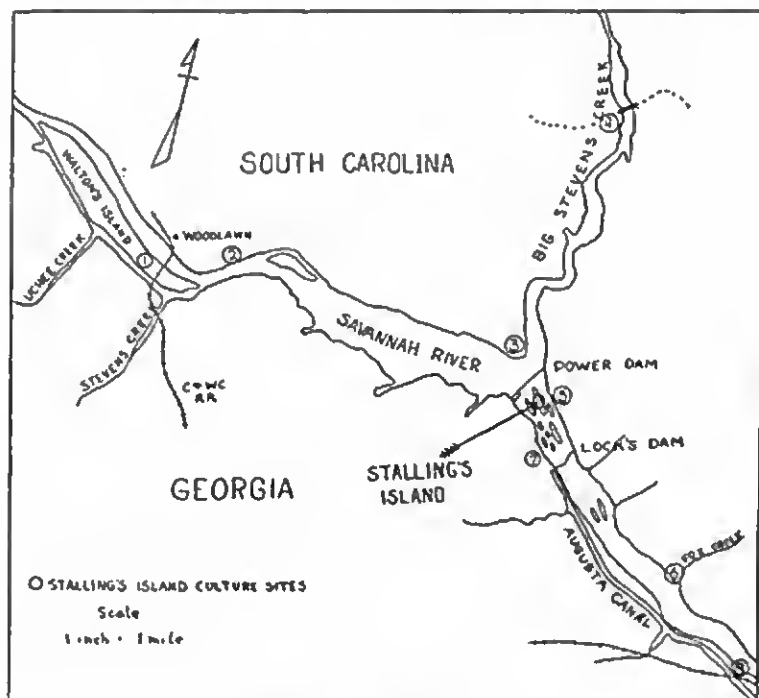


FIGURE 1
Stalling's Island culture sites

is a low mound covered with a shell deposit. In this case, the shell deposit covers a natural elevation of some 12 feet in height along the river bank. Site 7, a small shell bed less than a tenth of an acre in area, marks another site of these people. Site 8, situated between the Charleston and Western Carolina Railroad and the Savannah River, is another small site where the shell deposit

is still visible. In the writer's collection there is sufficient material from all the sites mentioned above to establish them as having been at one time occupied by the Stalling's Island people. With the exceptions of Sites 1 and 2, where sherds of paddle-stamped ware were found in addition to the typical Stalling's Island sherds, there is no evidence that any later people occupied the locations in question.

It is possible that other sites unknown to the author may exist, although the territory shown on the map has been carefully covered. It is, however, most probable that several sites have been destroyed by the flood waters of the Savannah in years past, as has been the case in recent times with Sites 1 and 2.

CONCLUSIONS

THIS report has attempted to set forth the facts as found during the excavations carried on by Mr. and Mrs. C. B. Cosgrove and to give what little information was gathered during the preliminary work. It has likewise attempted to describe the various artifacts found and it seems that sufficient evidence is at hand to establish the fact that the so-called Stalling's Island people have a distinct culture, having characteristic pottery and chipped implements and lacking the celt and the pipe.

Their known village sites are all marked by shell deposits, and the fact that shellfish was an important part of their diet is quite evident. The data obtained through stratification also establishes the fact that the Stalling's Island people occupied the Savannah River Valley at a time previous to the makers of the paddle-stamped and other types of Southeastern ware.

As there is no evidence that this culture developed at or in the vicinity of Stalling's Island, it is necessary to look elsewhere for its origin, and in all likelihood, as time progresses and further work is done in the Southeast, other village sites of these people will be found and further light will be thrown upon this interesting culture.

SUMMARY OF SKELETAL MATERIAL FOUND IN BURIALS

EIGHTY-FOUR burials were found throughout the excavations covered by this report, seventy-two being uncovered during the work carried on by Mr. and Mrs. Cosgrove, the remaining twelve being found during the previous work. There is no record, so far as can be found, of the number of burials found by Col. Jones. Referring to the detail map of the excavations (Plate 7), it will be seen that by far the majority of the burials are grouped along the center of the mound, only a few being scattered here and there near the sides. That the majority of house sites were also clustered along the center of the mound is evidenced by the distribution of fireplaces and pits in this general location. Due to this fact (the occasional use of pits for burial purposes and the nature of the refuse in the grave fills) it seems very likely that the Stalling's Island people practised the custom of burying their dead underneath the floors of their crude homes.

With the exception of bundle burials and the remains of infants, all the bodies were placed in the graves either in a semi-flexed or closely flexed position. No attention was given to orientation, the skeletons being found facing in all directions. In a number of cases the flexed bodies were placed in the grave in a seated position. The soft fill of abandoned storage pits was often utilized as a convenient place to bury dead, several skeletons even being tucked into pits which had been cut into the clay. It was likewise the practice to scoop out shallow graves in the clay base. The burials ranged in depth from those either in, or partially in, the clay to within 1 foot of the surface.

The bones as a rule were very fragile. Although it was possible in some instances to develop the skeleton for photography, upon lifting, the bones crumbled away. Only two perfect skulls were recovered, although numbers were shipped to the Museum in a fragmentary condition. Due to extreme decay, accurate cranial measurements of a sufficient number of skulls to draw any definite conclusion is impossible. However, it can be said in general that the Stalling's Island people were brachycephalic and did not as a rule practise cranial deformation. There are, however, several im-

perfect skulls that show partial deformation. It is unfortunate that the skeletal material is so badly decomposed, otherwise it might have been possible to reach some conclusion in respect to the cranial differences between the Stalling's Island people and those coming later. That the later peoples also used the mound for burial purposes is shown by the presence of burials in paddle-marked urns and sherds of stamped ware in grave fills. That by far the great majority of the burials are those of the Stalling's Island people is evident, due to undisturbed cultural deposits above. There are, however, enough border cases, particularly burials near the surface, where, with the evidence obtainable, it is impossible to say to what period the burial belongs.

It was not a common practice of the Stalling's Island people to place mortuary offerings with the dead. After eliminating the two urn burials and two others that can be definitely attributed to later peoples, only twenty-six out of eighty burials had any objects with them, and for the most part the objects found were of an insignificant nature. In four cases the mortuary offerings took the form of the skeleton of a small animal with canine teeth. Of the twenty-six burials having offerings, two were bundle burials. Six such burials were found, in all cases the bones making a compact mass, many being broken and giving every indication of having been wrapped in a bundle. From their location they are in all probability the remains of the original inhabitants of the island.

In a representative group of thirty of these Stalling's Island burials there were five infants (up to three years old), five youths (up to twenty years old), three young adults (up to thirty-five years old), three middle-aged persons (up to fifty-five years old), and fourteen old persons (over fifty-five years old). Of these same thirty skeletons there were twelve males, nine females, and nine of which the sex was not noted.

A most interesting fragment of a human skull was found in the cultural deposit, unassociated with any other remains or objects. Mr. C. B. Cosgrove described this fragment and the liberty is taken of quoting from his article.¹ (See Plate 72.)

"Instances of the surgical operation of prehistoric trephining are not common among the early people who occupied the terri-

¹ Cosgrove, 1929.

tory embraced by the United States. Because of the meager evidence of such operations, it is of interest to report the recent finding of a trephined skull in the southeastern part of the country. This discovery extends the area of distribution of trephining in aboriginal America.

The fragment of skull was exhumed by the writer in January from a mound on an island in the Savannah River nine miles above Augusta, Georgia, while in charge of an expedition sent there by the Peabody Museum of Harvard University. Unfortunately, the skull is incomplete and the piece found was a floater in the soil, having been separated from the rest of the body by the continued pitting and digging in the mound by these pre-Columbian Indians during the occupation of the site. The fragment is from an adult skull, and around the incision the marks of the flint knife can be clearly seen. The circular opening is surprisingly symmetrical. The edges are beveled and at points show the growth of new bone."

Dr. E. A. Hooton has examined the specimen from Georgia and furnishes the following technical report:

"The specimen includes the posterior sagittal portion of the right and left parietals and the lambdoidal portion of the occipital bone of a middle-aged adult male (?) cranium. The sagittal suture is obliterated internally, but the lambdoid suture is open. A piece of bone roughly circular in shape and about 38 mm. in diameter has been cut out of the skull vault. Only the posterior half of the edges of the aperture is available for examination in the fragment. The circle of bone involves the left parietal and a small portion of the right. The posterior edge of the aperture cuts the sagittal suture about 15 mm. anterior to obelion. The edges of the aperture are beveled from without inward. The external table is markedly cicatrized and the internal table shows healing at certain points, as does also the diploë. However, the patient could not have survived the operation for any long period, since the process of healing had not proceeded far."

Very little would be added to this report should all the burials be described in detail, but of the burials found during the preliminary excavations, C1, C5, and C8 were of particular interest. Burial C1, a flexed skeleton resting on the clay, was in an extreme state of decay. With it were two large, beautifully chipped knives,

halves of two others of similar pattern, one spear head and a finely polished cylindrical banner stone of reddish material (Plate 45, c). Burial C5, a bundle burial 4 feet below the surface, contained, in the middle of the mass of bones, a polished granite cylindrical banner stone (Plate 45, a). Burial C8, 2 feet below the surface, was the skeleton of an adult, in a semi-flexed position. About the neck there was a string of small beads, and lying beside the skull were three shell objects, possibly ear plugs (Plate 43, d).

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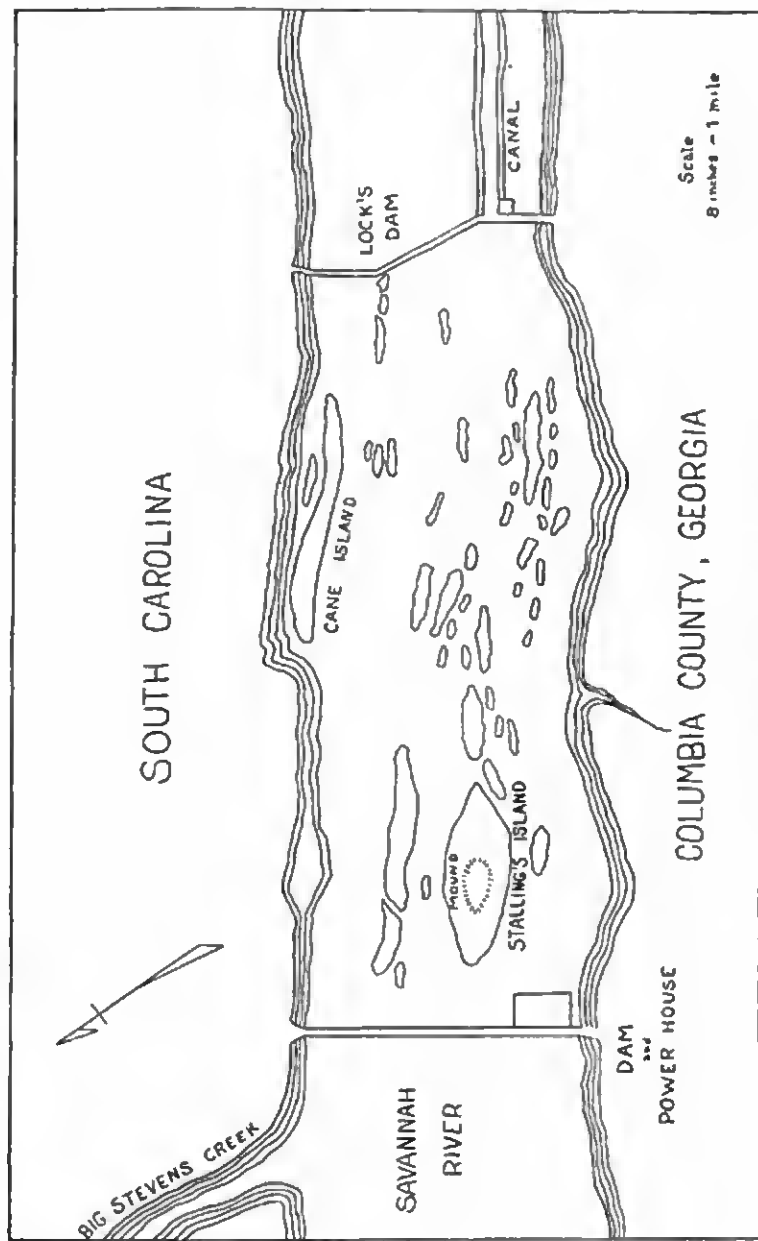
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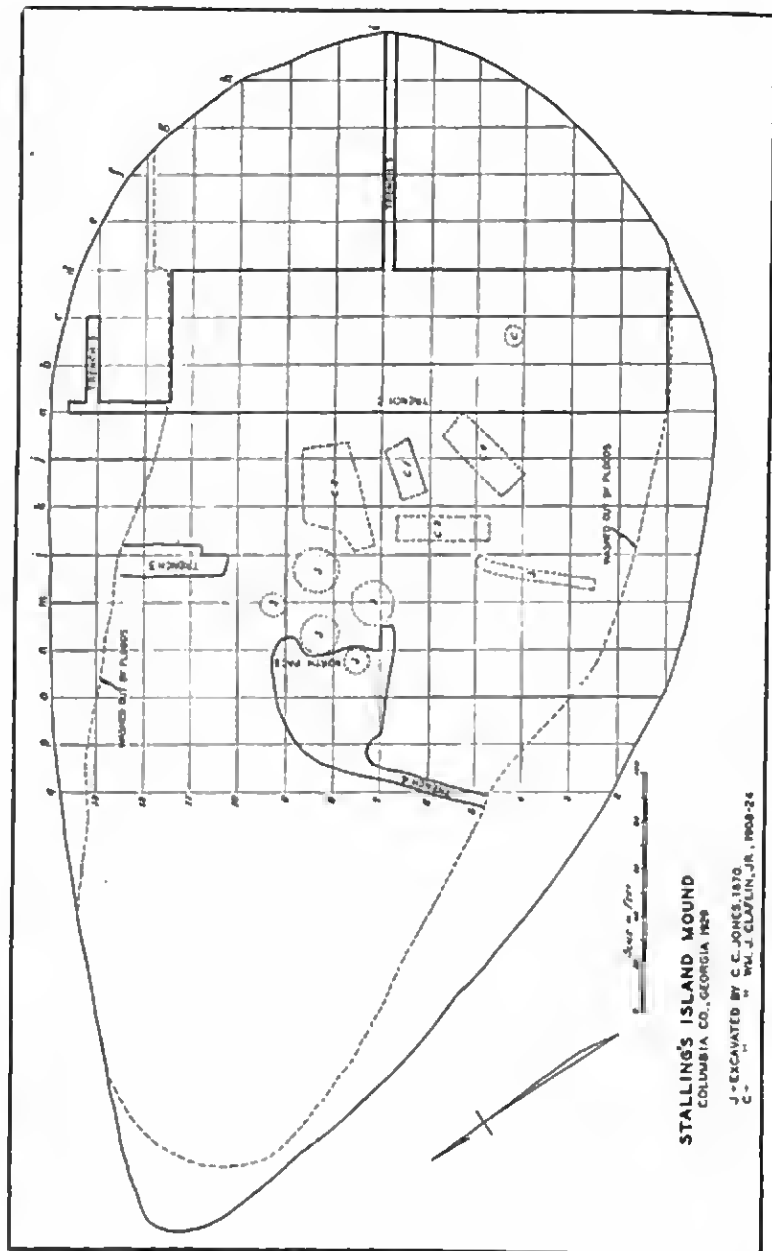
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Location of Stalling's Island in the Savannah River.



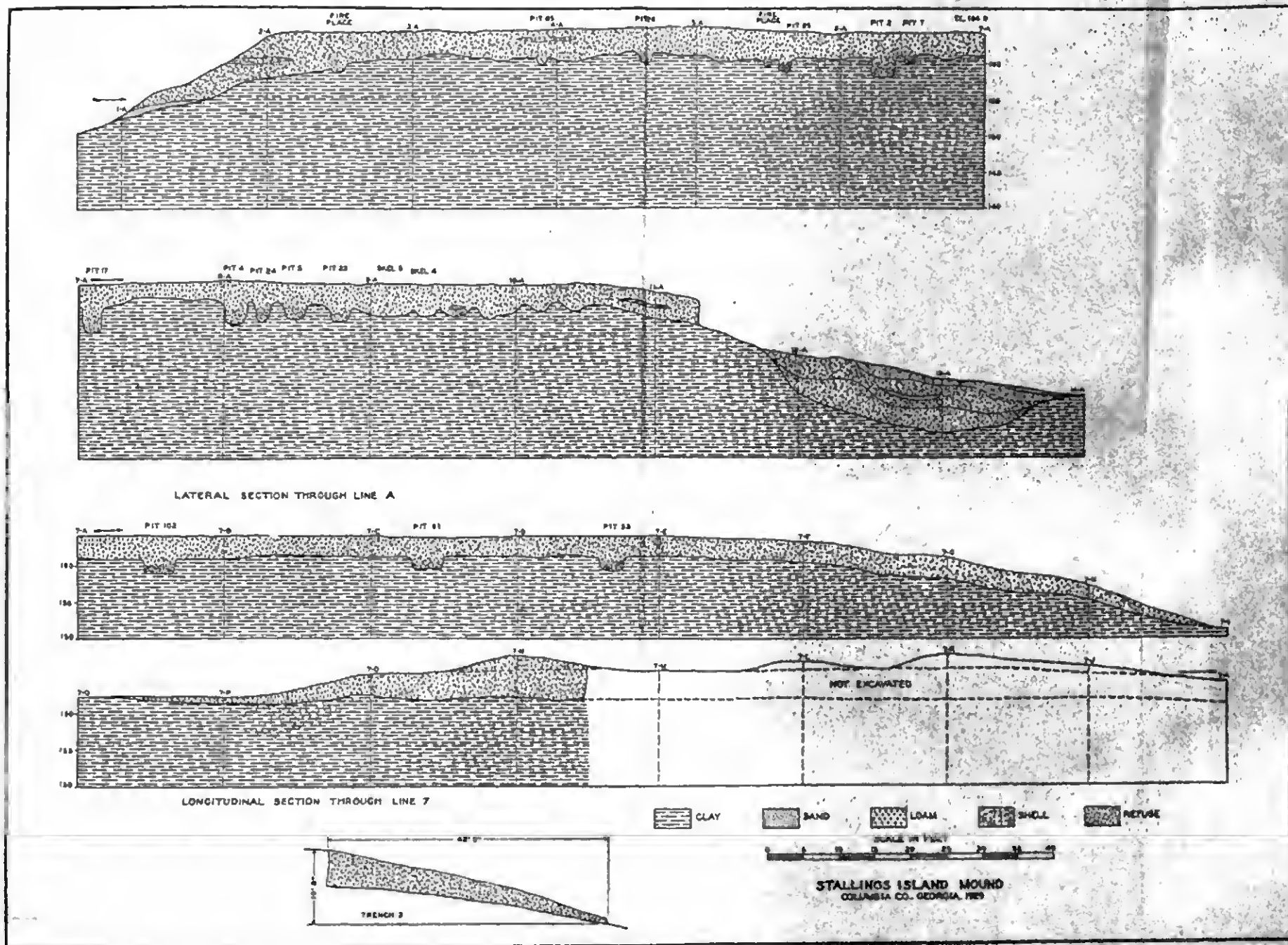
Stalling's Island Mound, showing excavations.



a, The western end of Trench C4. b, The western end of Trench C3, showing shell strata.



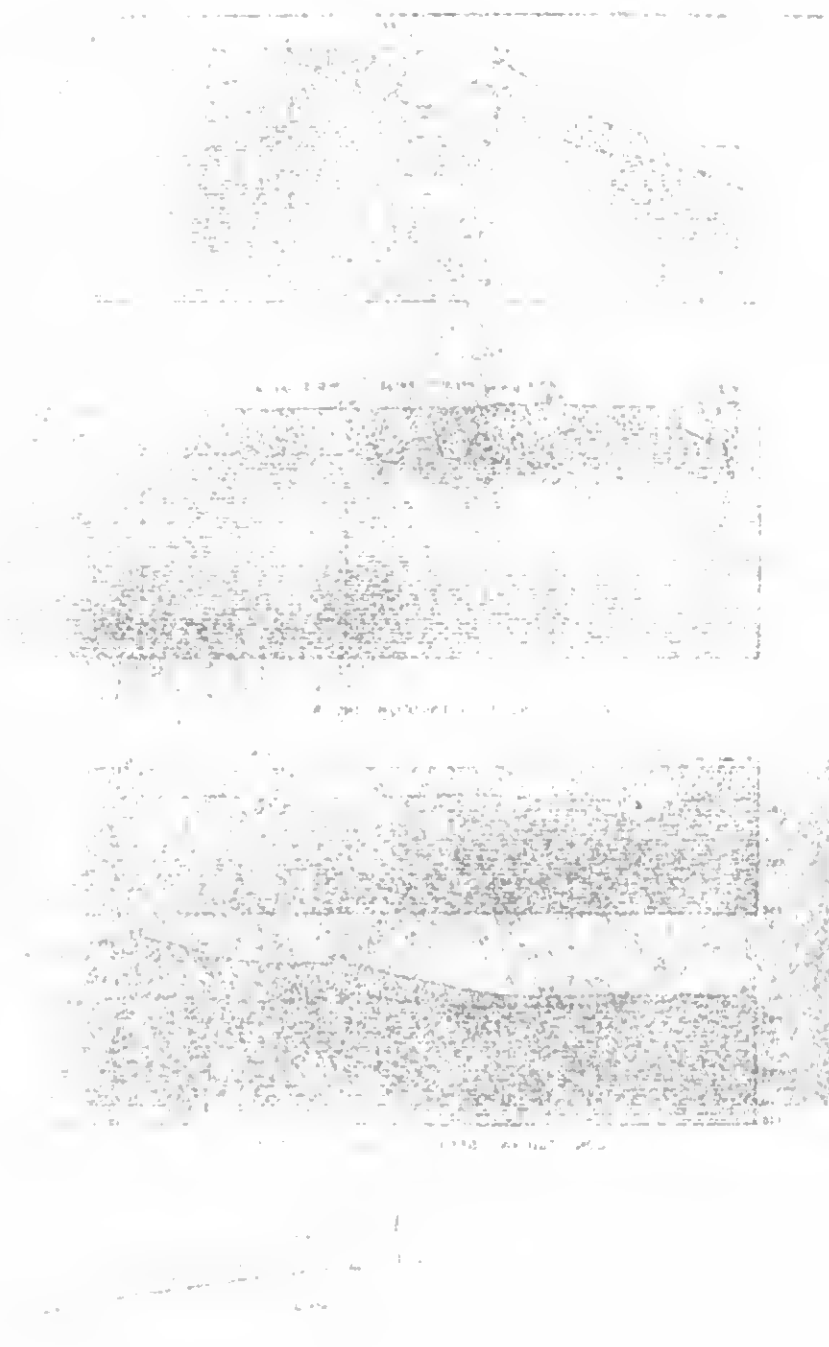
a, Trench 2. b, Trench 1.

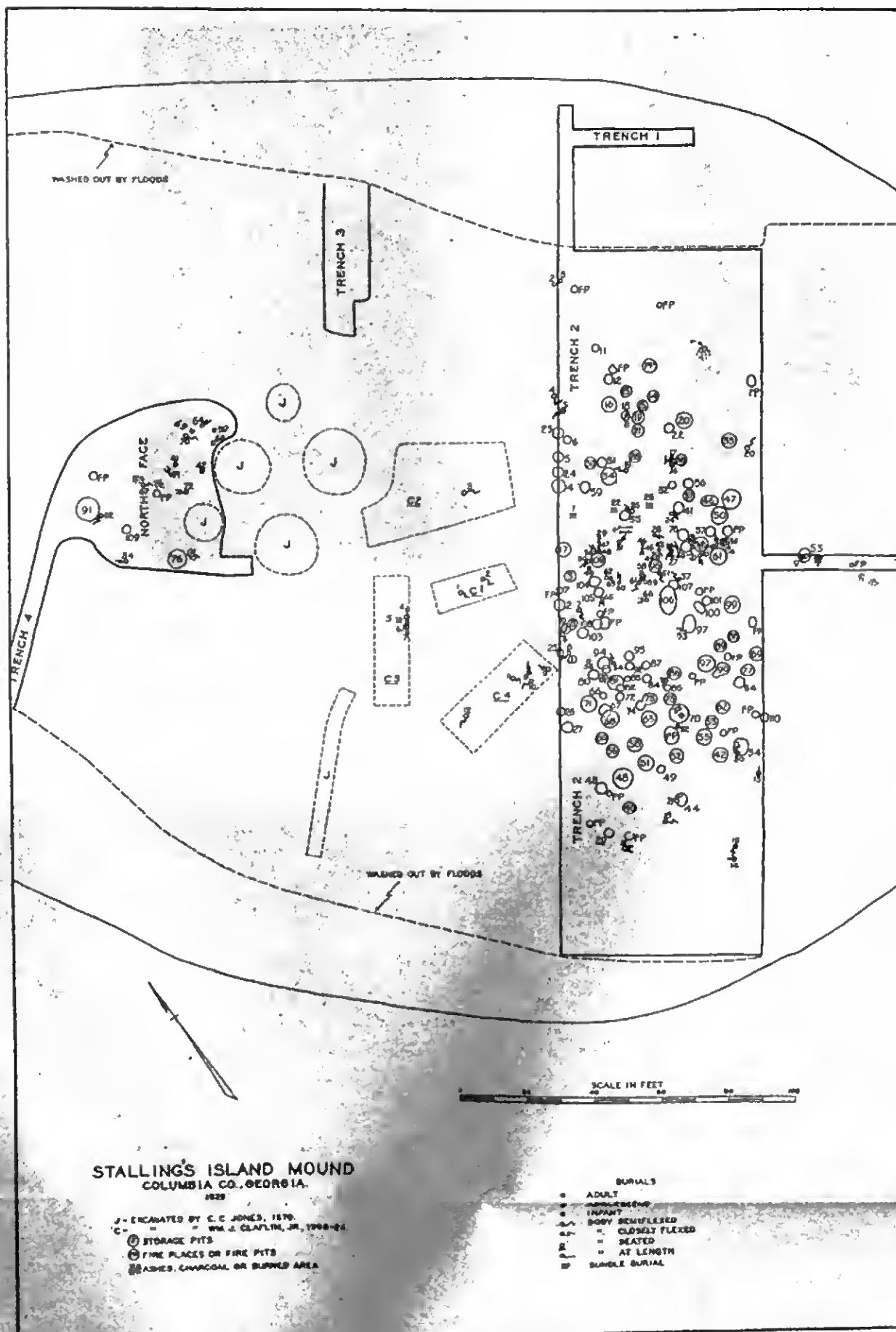


Sections through Stallings Island Mound.



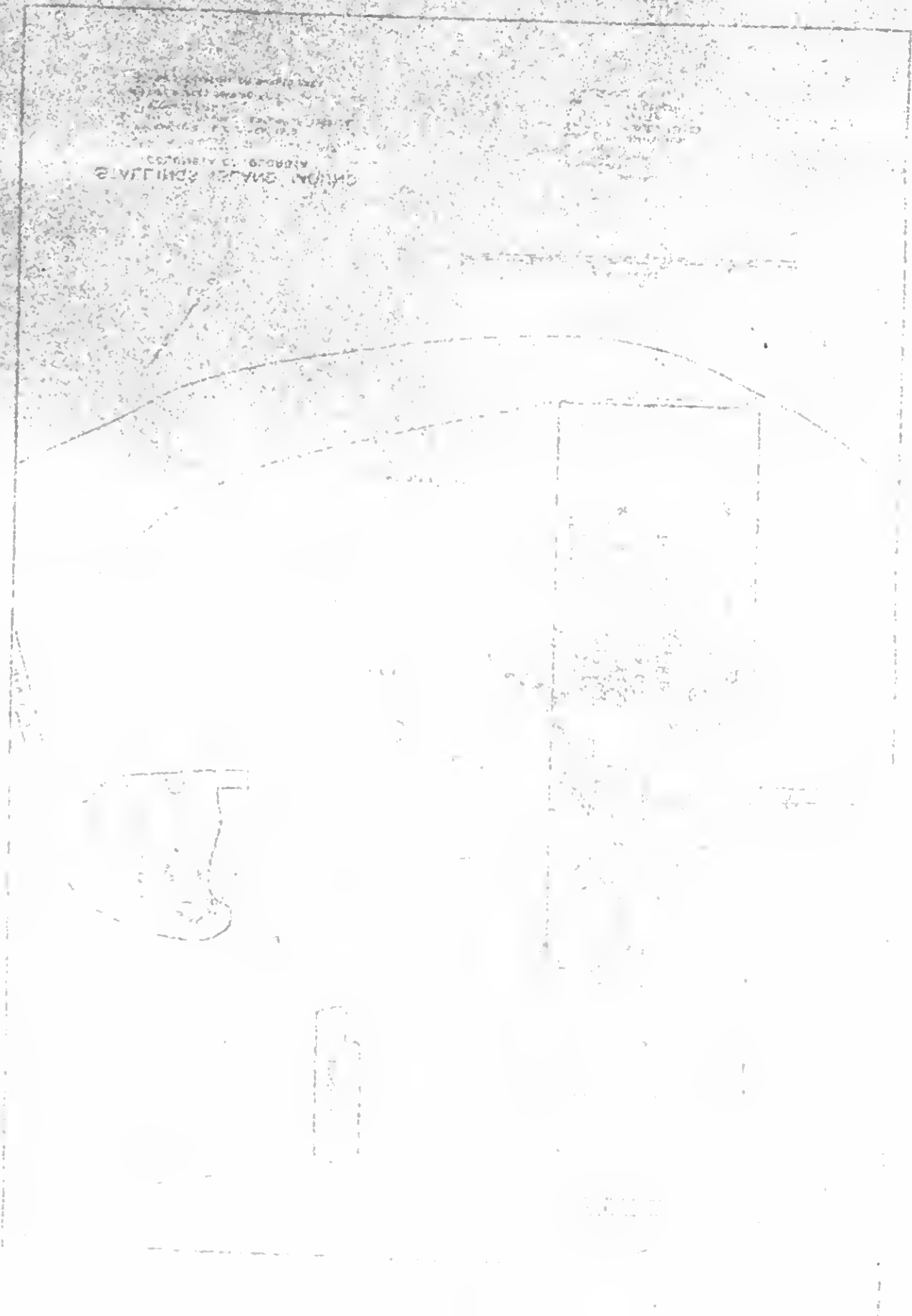
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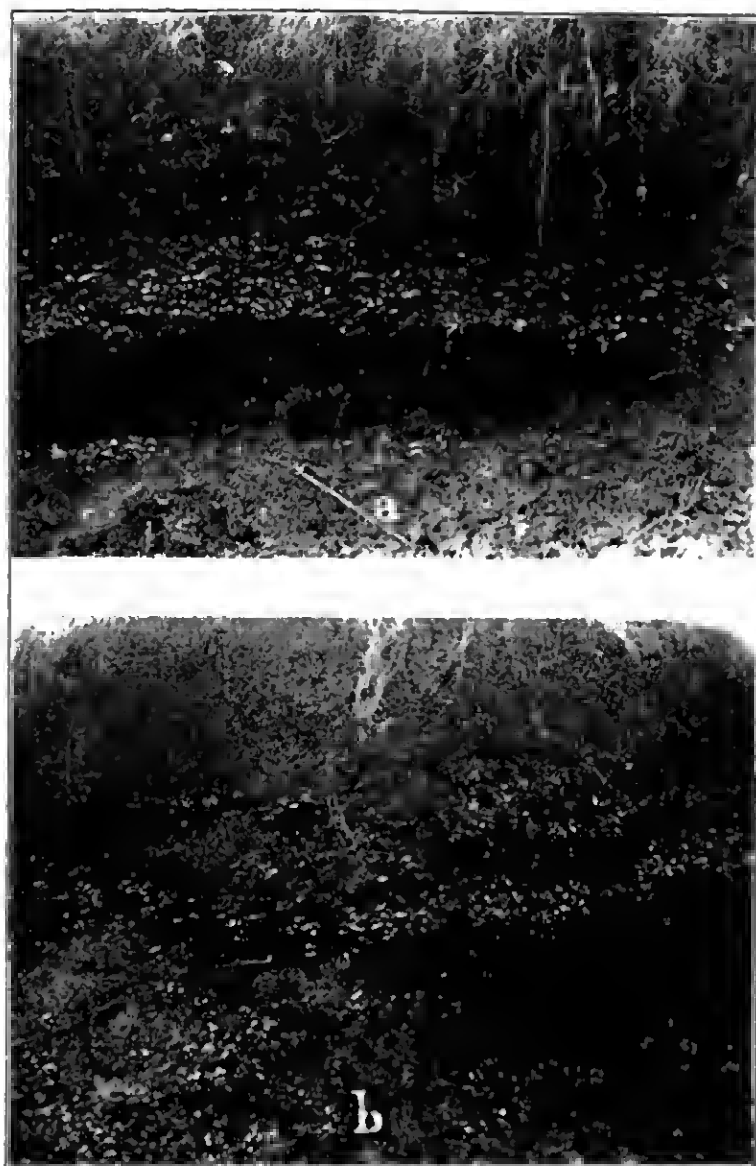




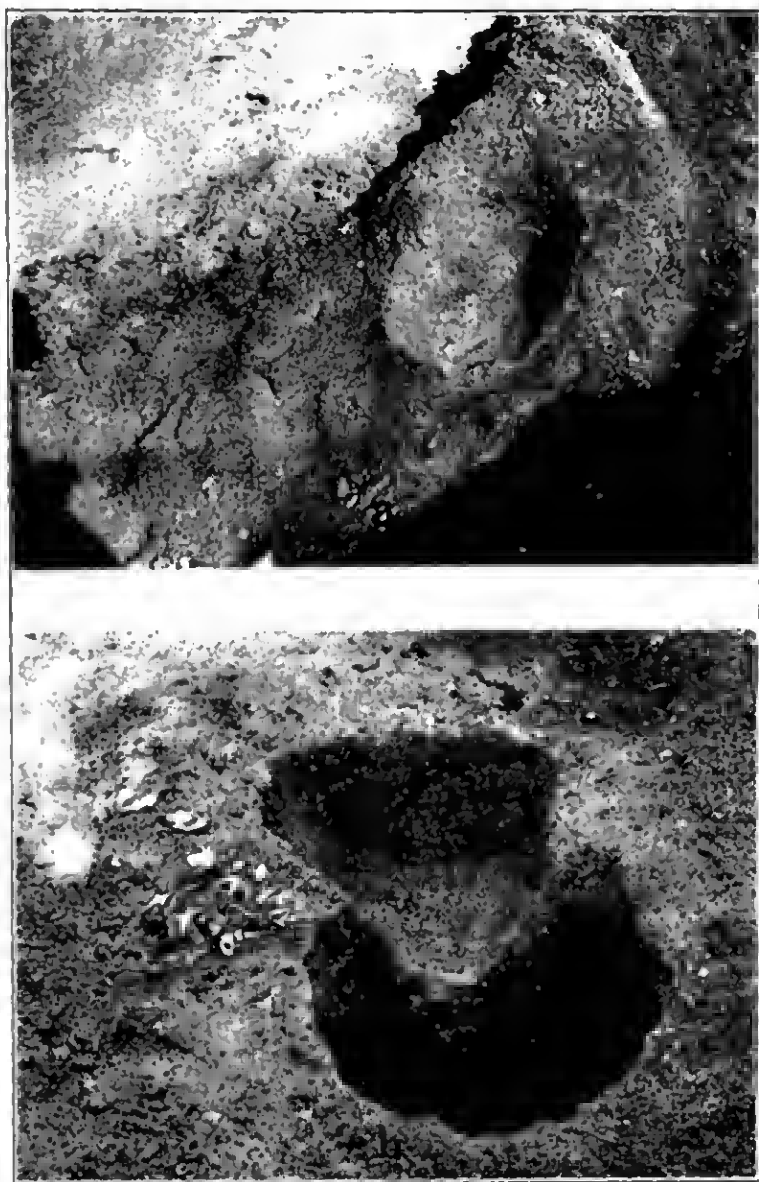
Stallings Island Mound, showing trenches, storage pits, fire pits, and burials.

CHINA, SHANGHAI





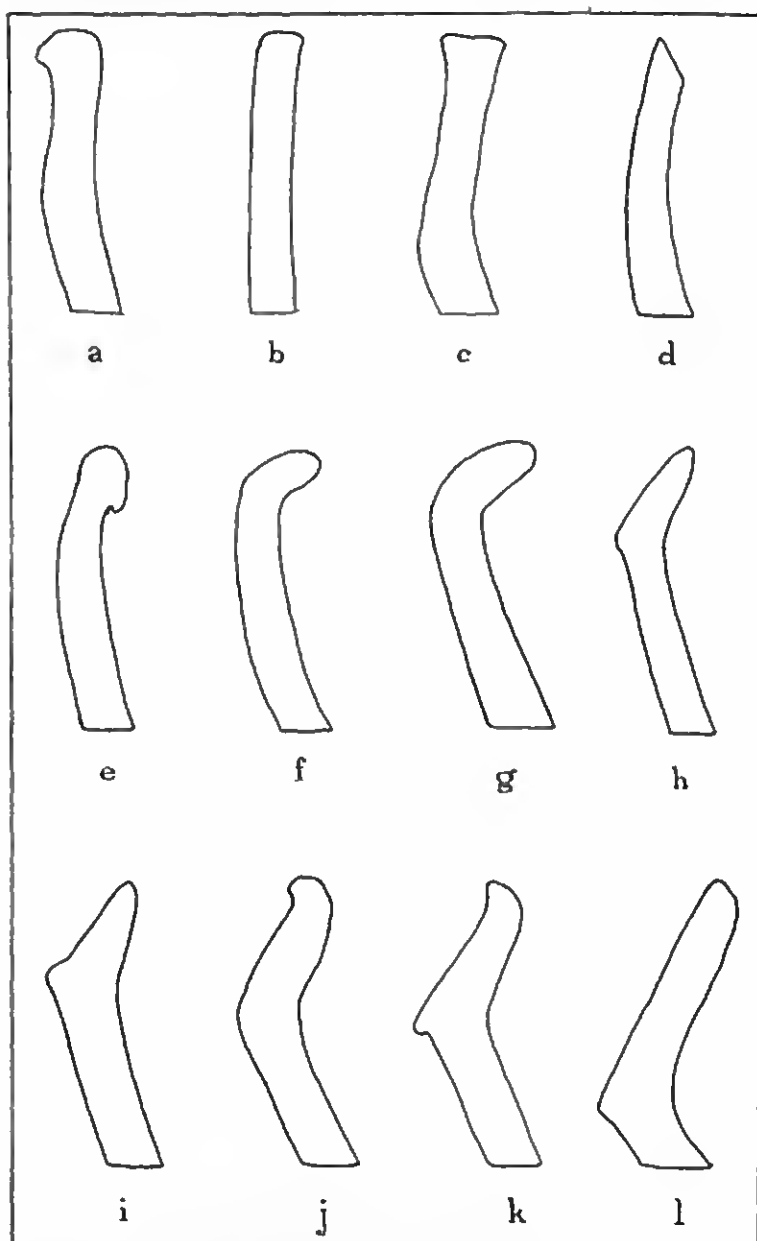
a, Shell strata, northeast end of Trench 2. b, Shell strata on eroded face of mound.



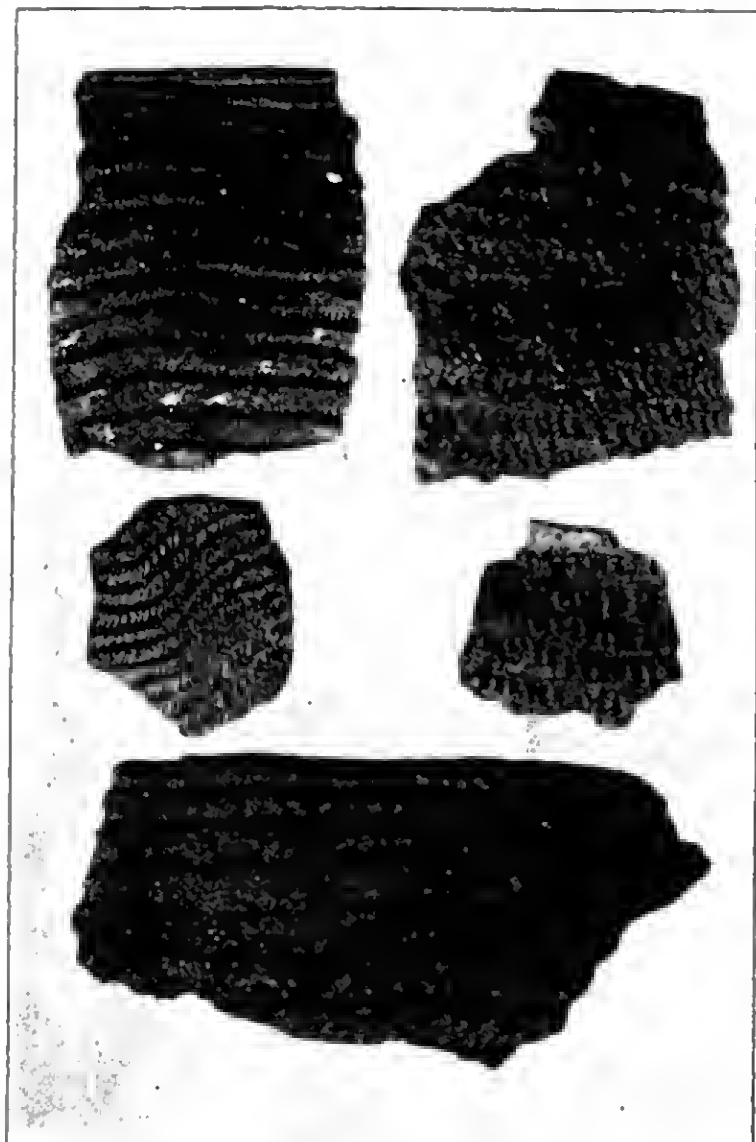
a. Fire pit, 7 feet south of 3A. b. Storage pit 108, with rectangular fire pit just beyond.



a, Storage pit No. 7. b, Storage pits and thirteen exposed burials marked with tags along line 7D to 7A.



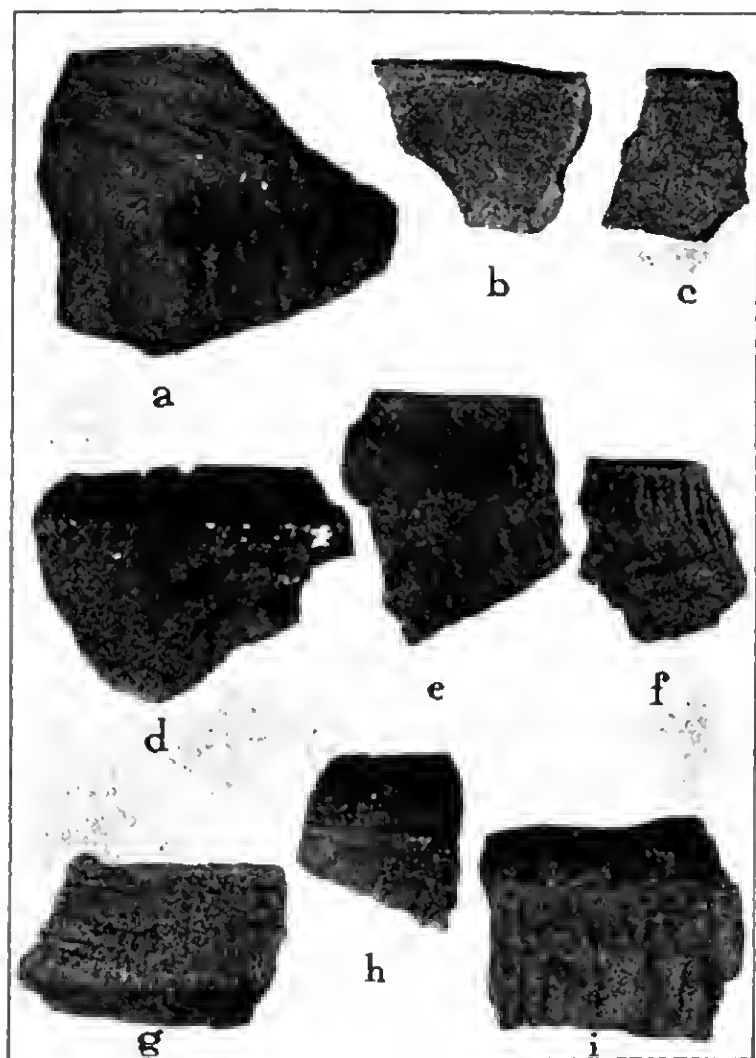
Sections of Stalling's Island culture vessel rims.



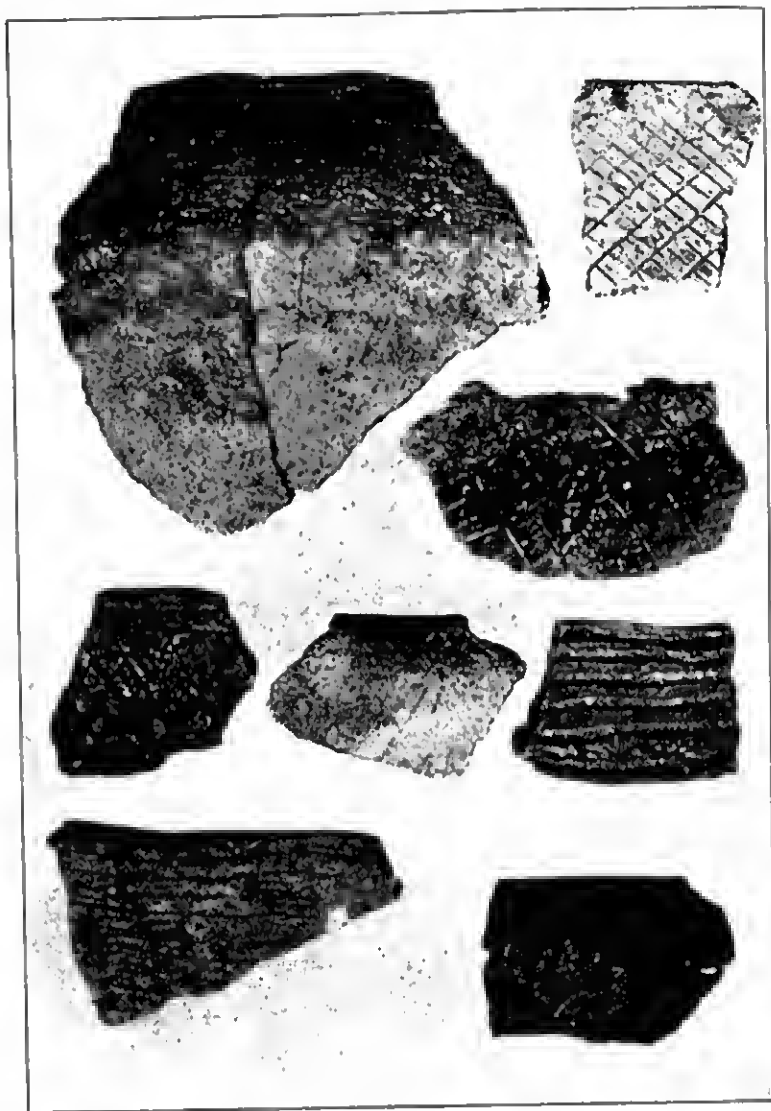
Typical Stalling's Island culture sherds.



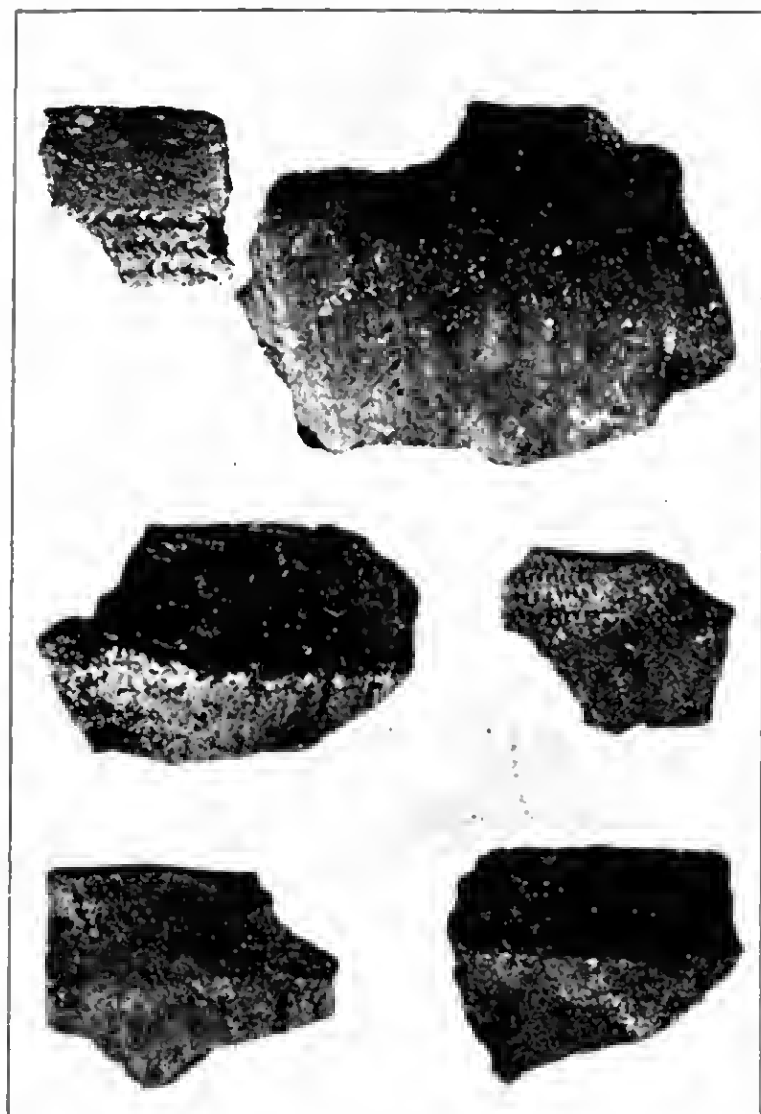
Characteristic designs of Stalling's Island culture sherds.



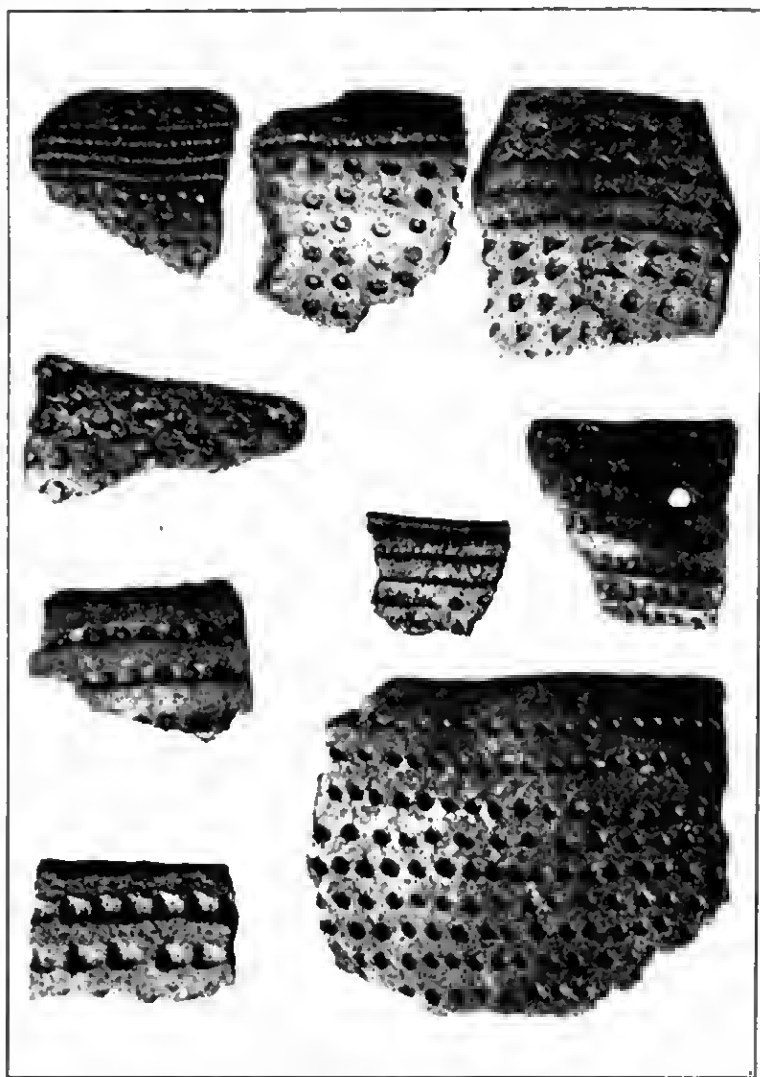
Plain and crudely decorated sherds.



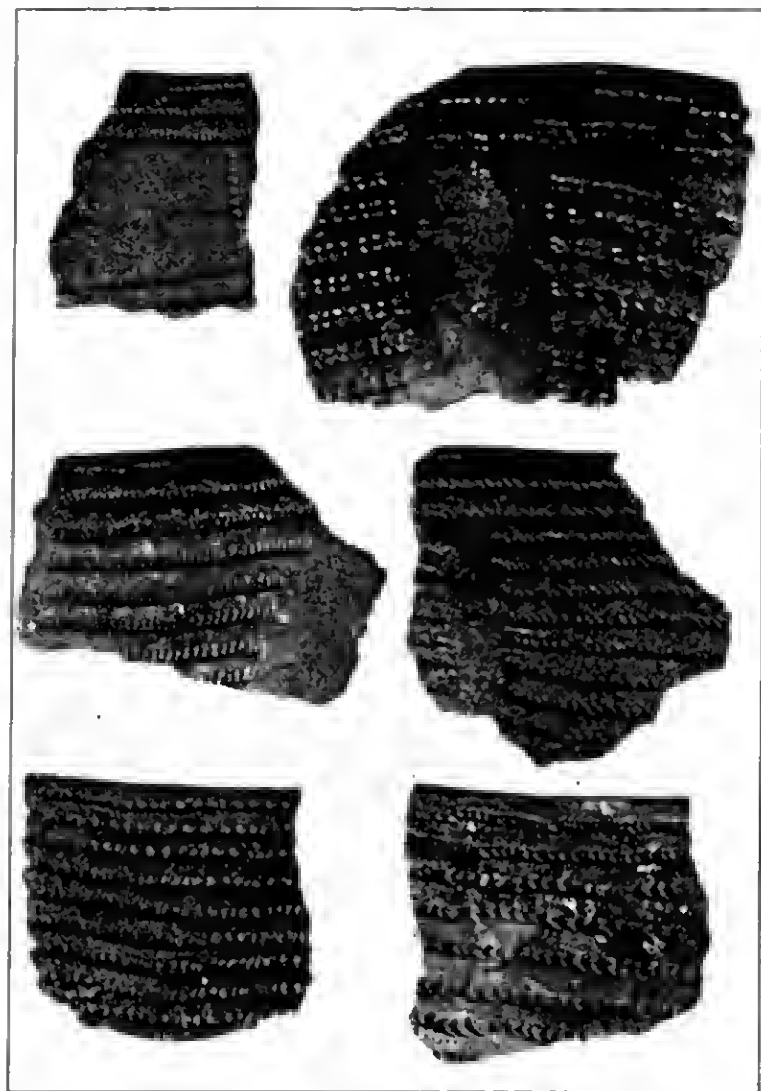
Stalling's Island culture sherds with crudely scratched decoration.



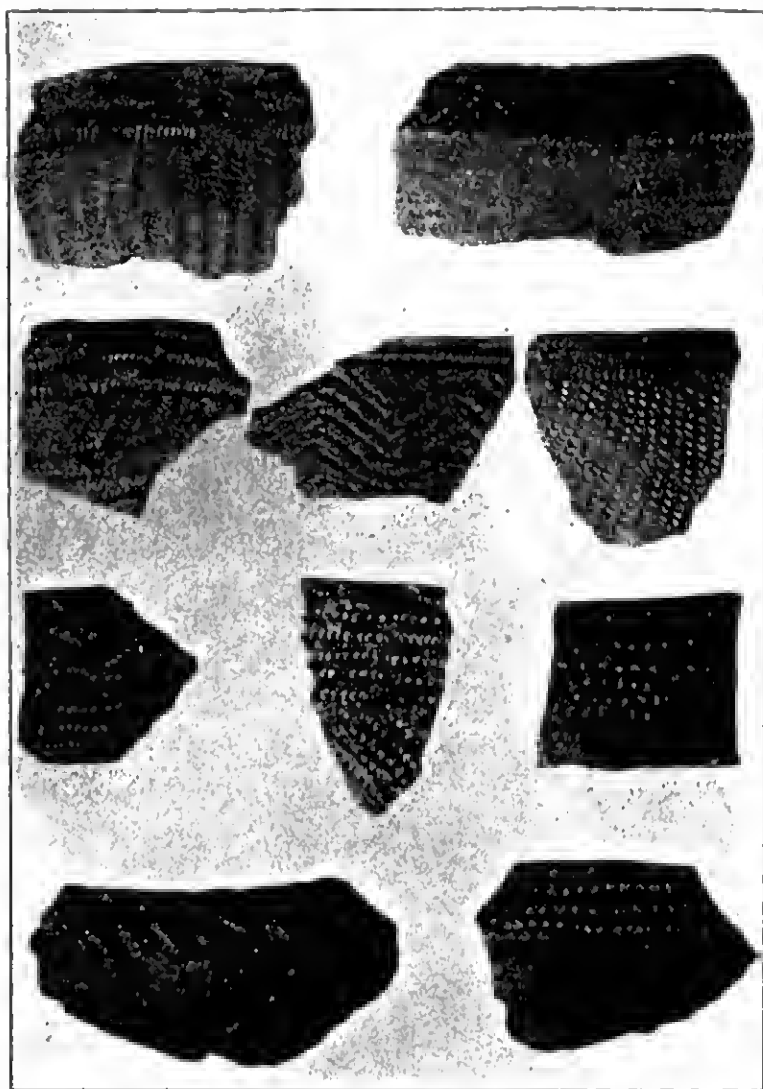
Stalling's Island culture sherds, showing small punctate designs.



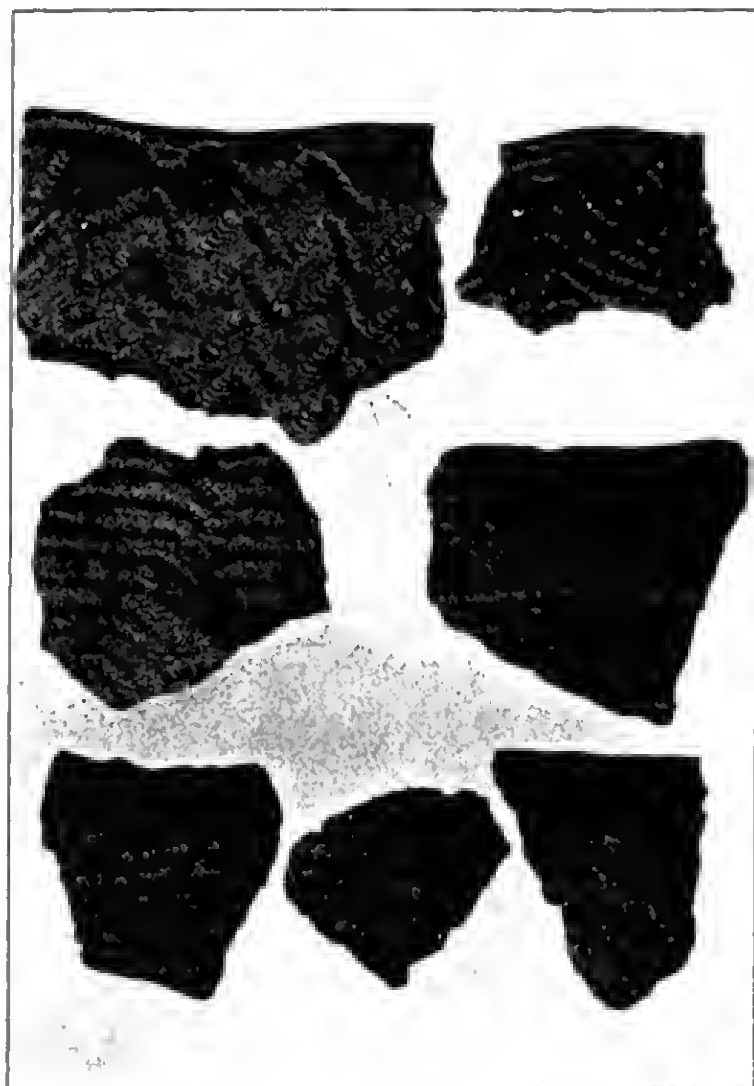
Stalling's Island culture sherds, showing punctates in the form of circles, dots, and half moons.



Stalling's Island culture sherds, showing how the typical punctate design was sometimes varied with blank spaces.



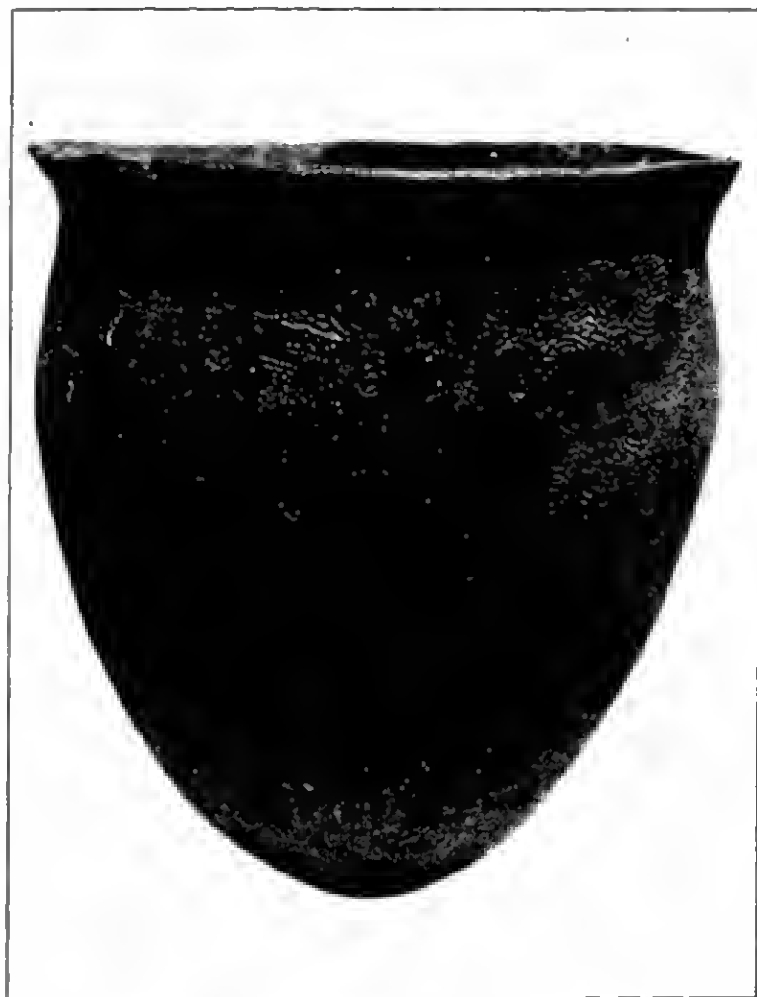
Sherds showing variations of the punctate design as it nears the rim.



More complicated forms of the Stalling's Island punetate decoration.



a. Urn burial (Skeleton 68). b. Bundle burial 69 and Skeleton 70.
Gorget (Plate 44) found with Burial 69.



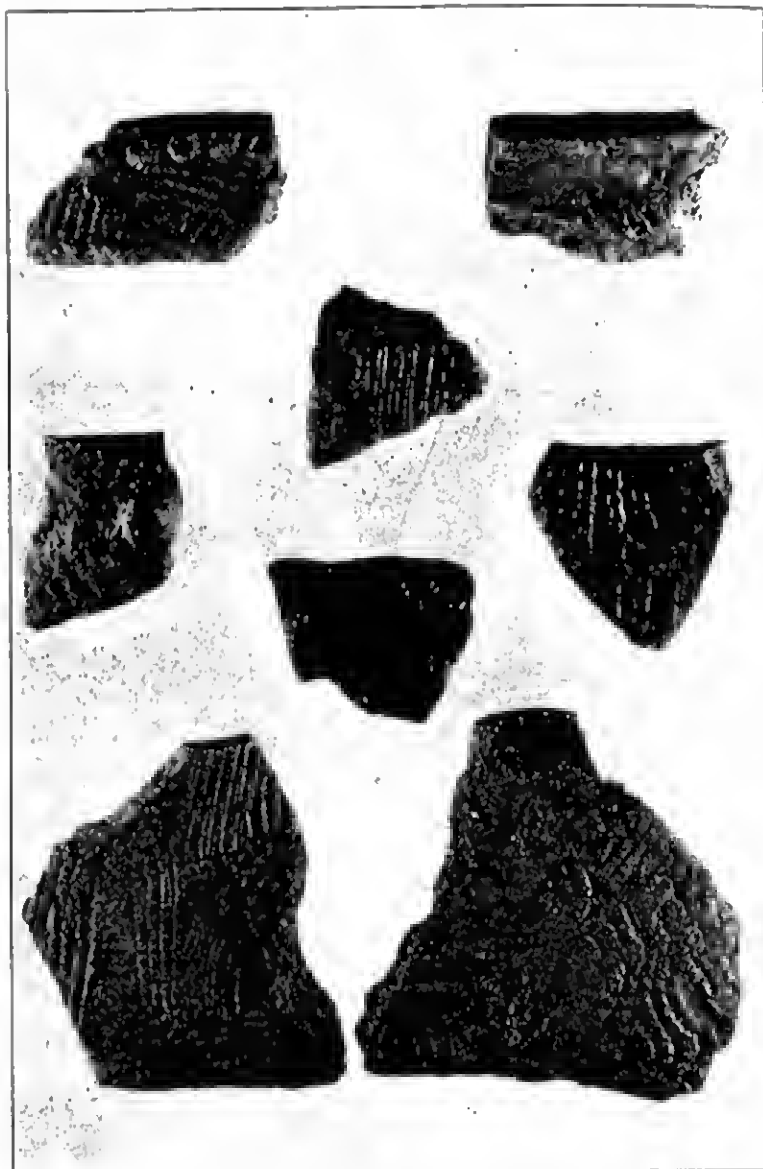
Paddle-marked urn containing the skeleton of an infant (Skeleton 39).



Bow, covering urn containing Skeleton 39.



Broken urn covering bones of an infant (Skeleton 32).



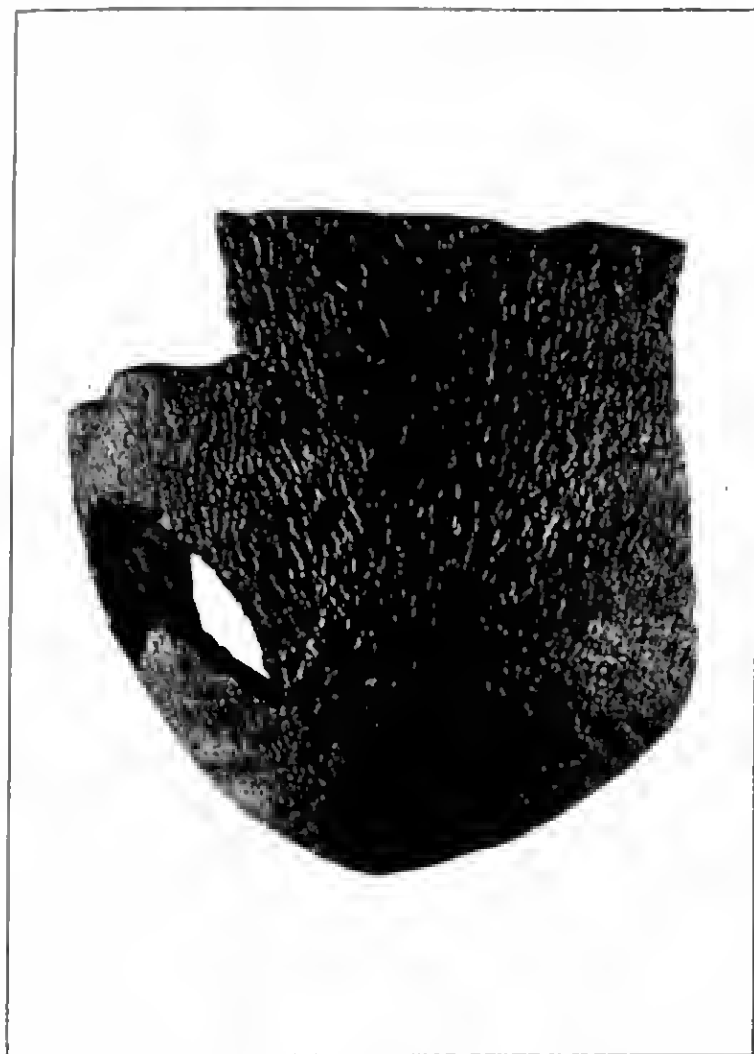
Sherds with stamped decoration (later period).



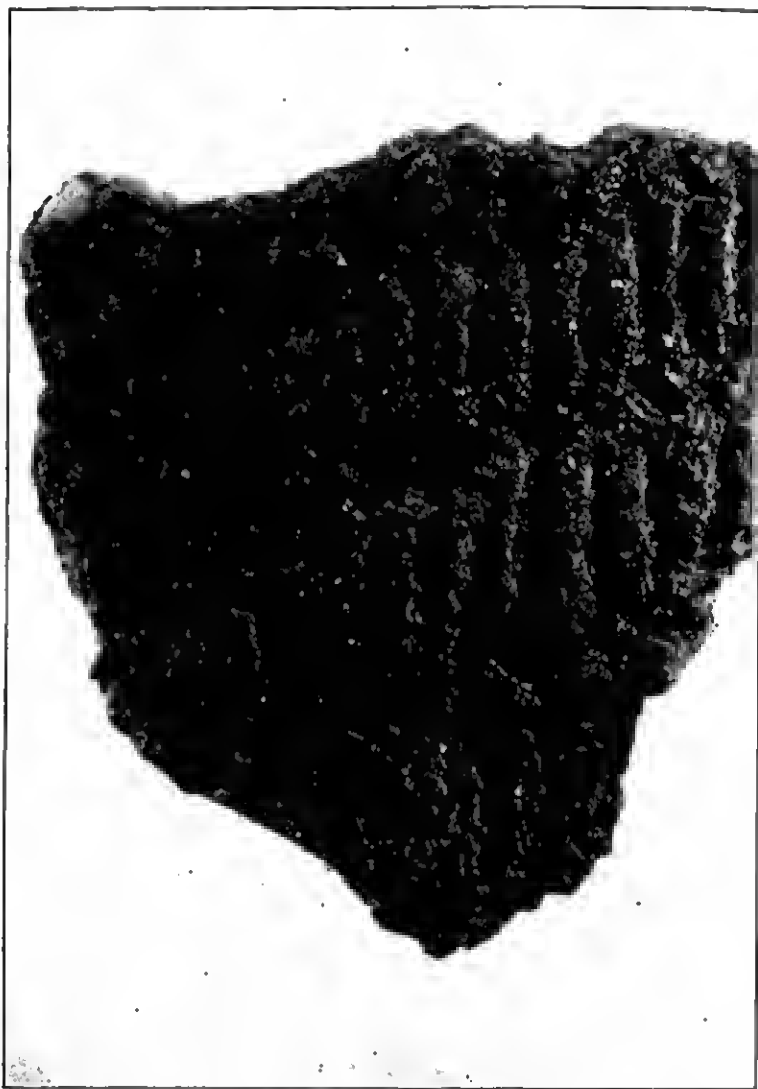
Sherds showing stamped grid decoration and two sherds presumably decorated with the aid of a wheel (later period).



Sherds of vessels decorated with a textile-wrapped paddle.



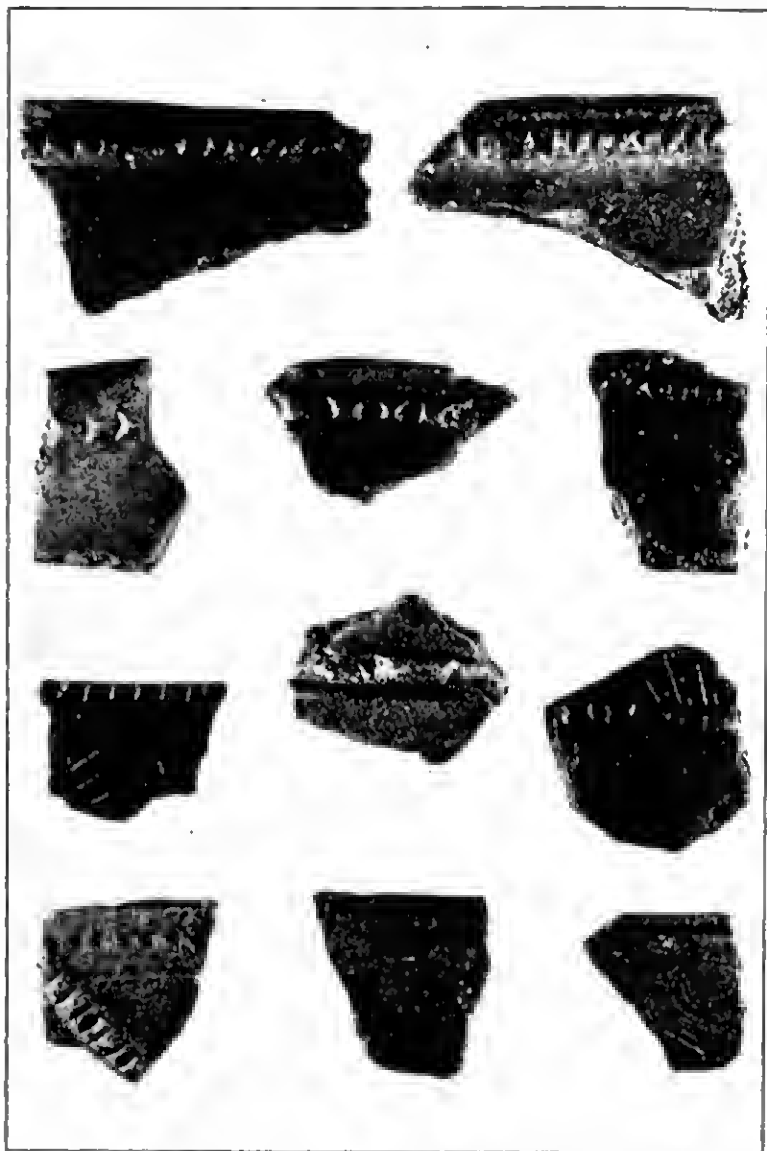
Partially restored pot decorated by means of a textile-wrapped paddle (later period).



Sherds of a vessel made inside a textile mold, slightly enlarged (later period).



Three urn rims found in pit 76 (later period).



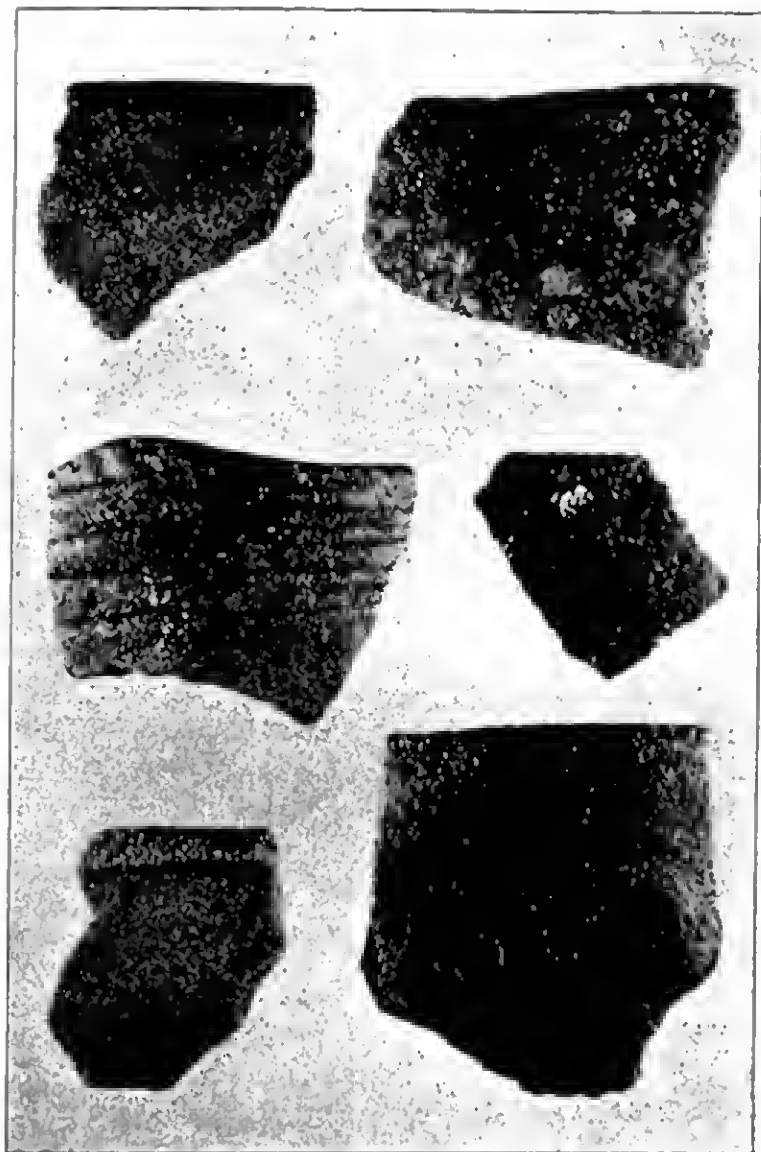
Sherds from vessels with indented rim bands.



Sherds showing lightly scratched decoration.



Sherds found in the grave fill of Skeleton 18 (later period).



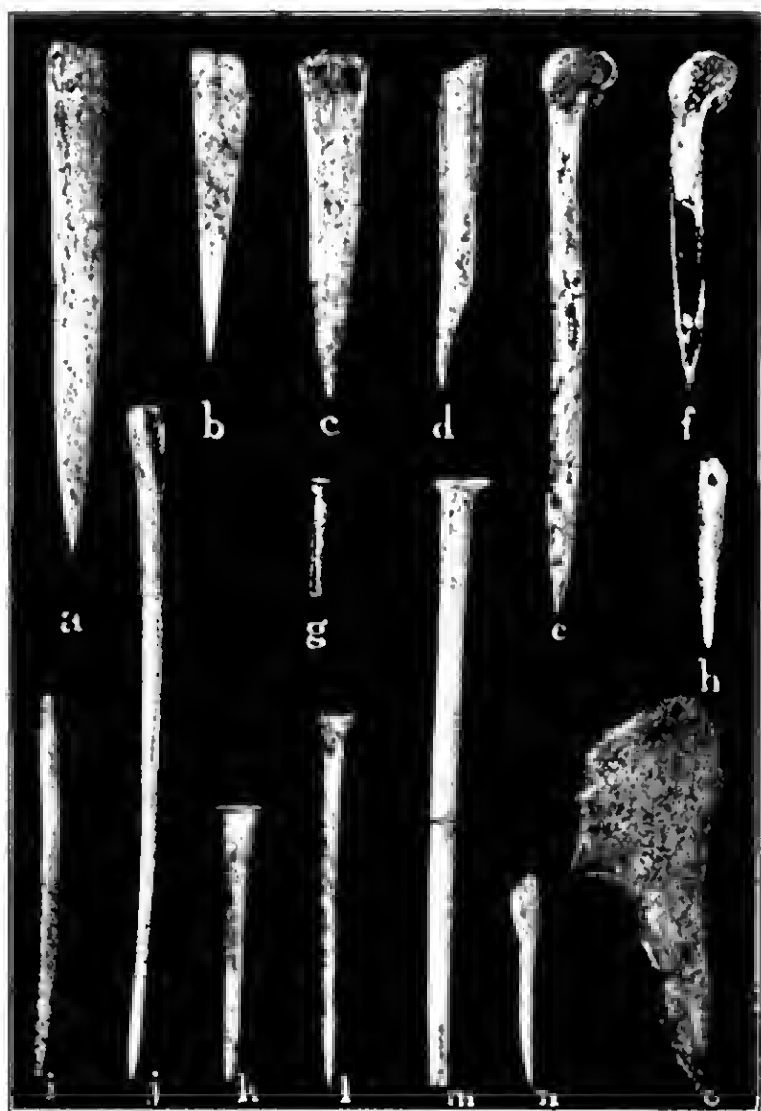
Sherds of vessels heavily tempered with grit and with cord markings on tops of rims
(later period).



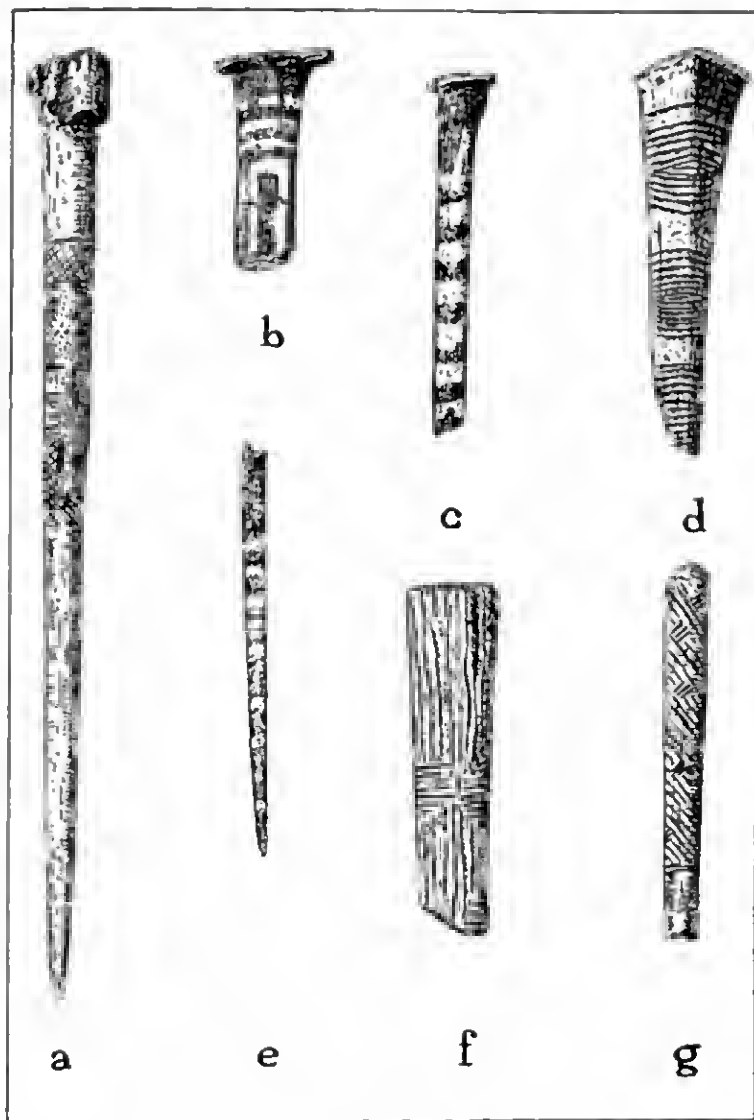
Savannah River types found at Stalling's Island.



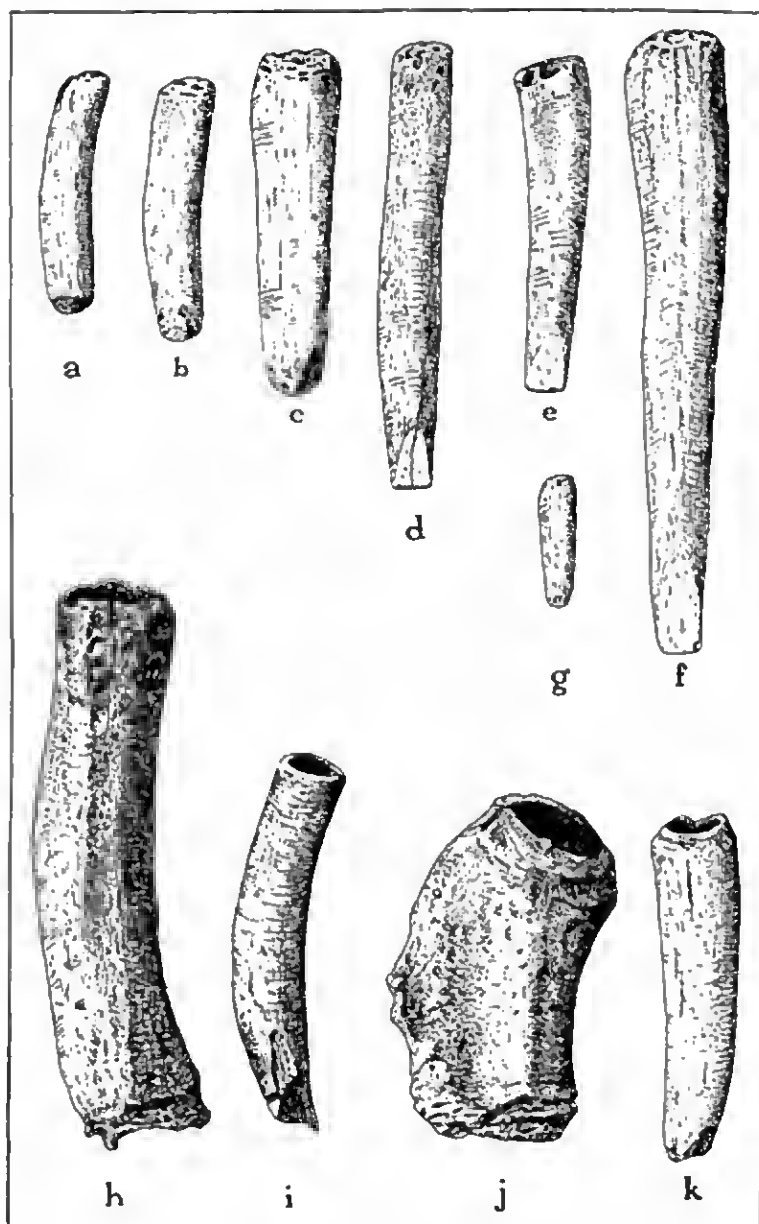
Worked antlers.



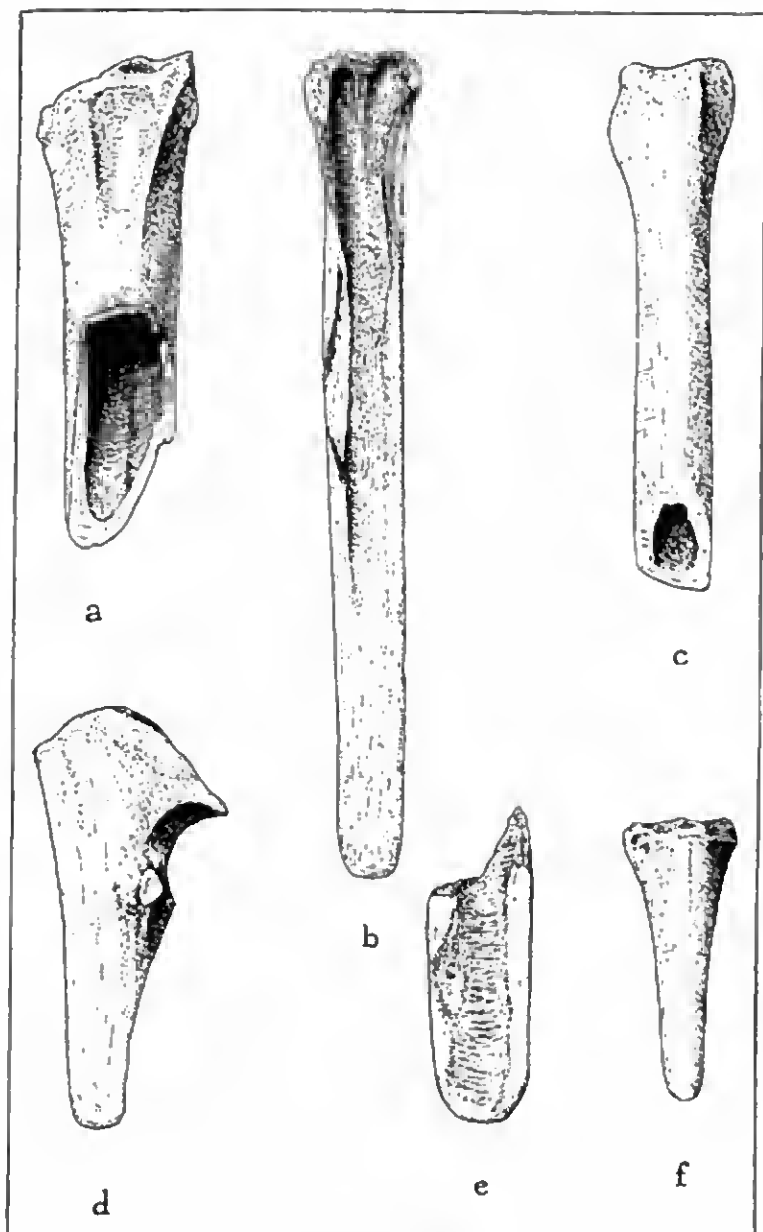
Pointed bone objects.



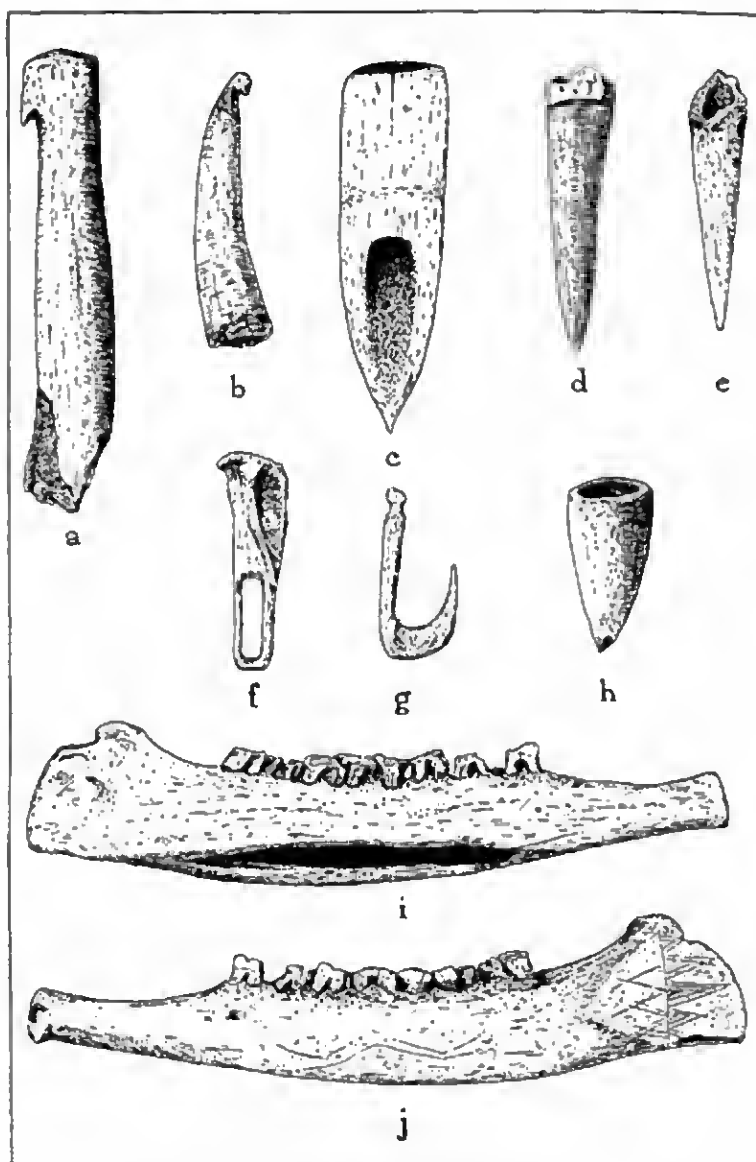
Decorated bone objects.



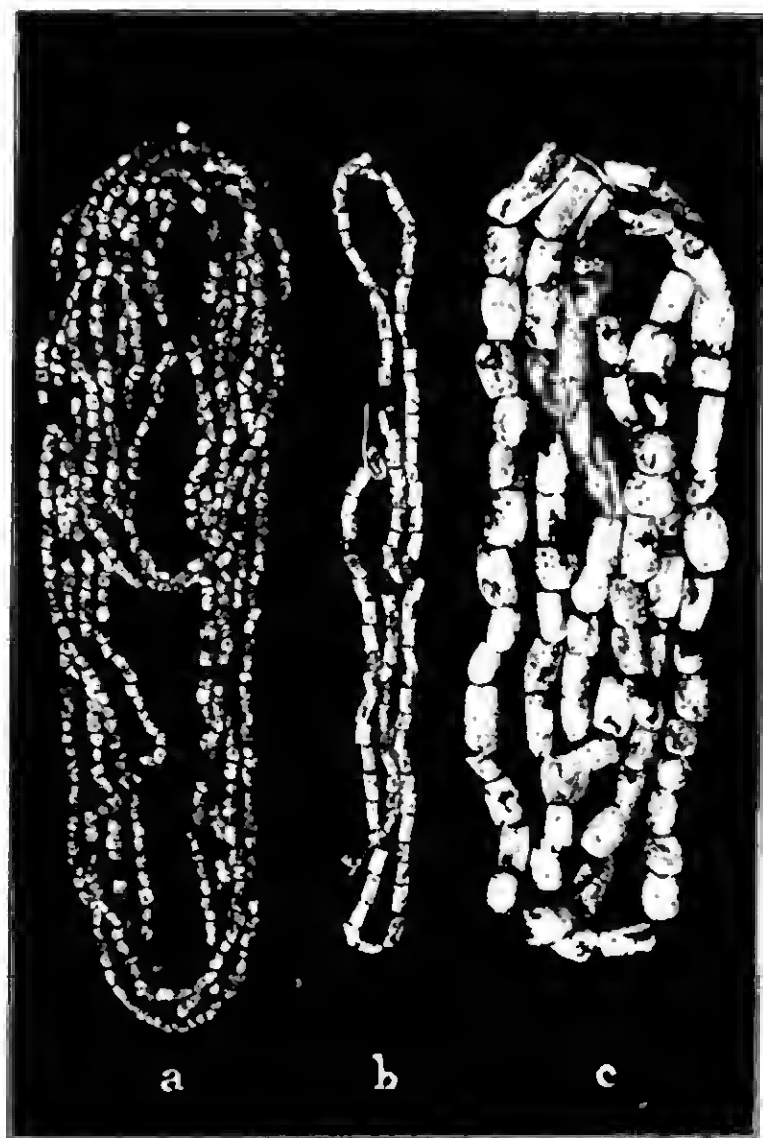
Punches, flakers, and hafts of bone.



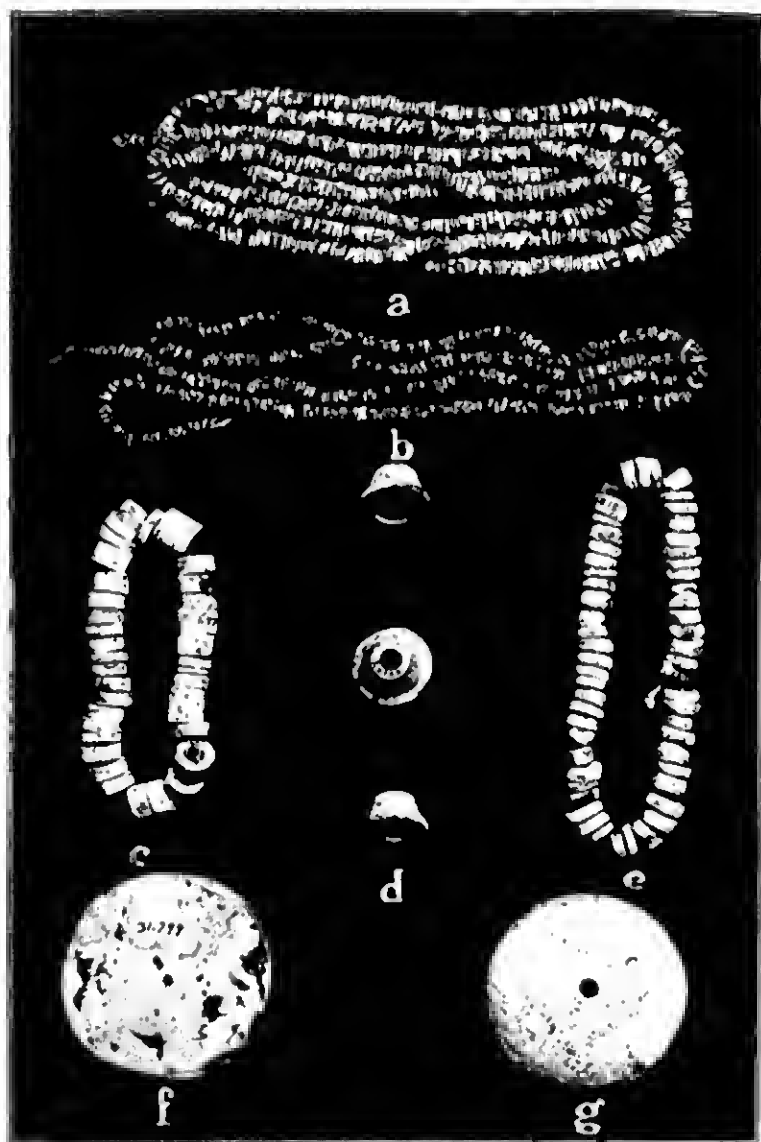
Blunt ended bone objects.



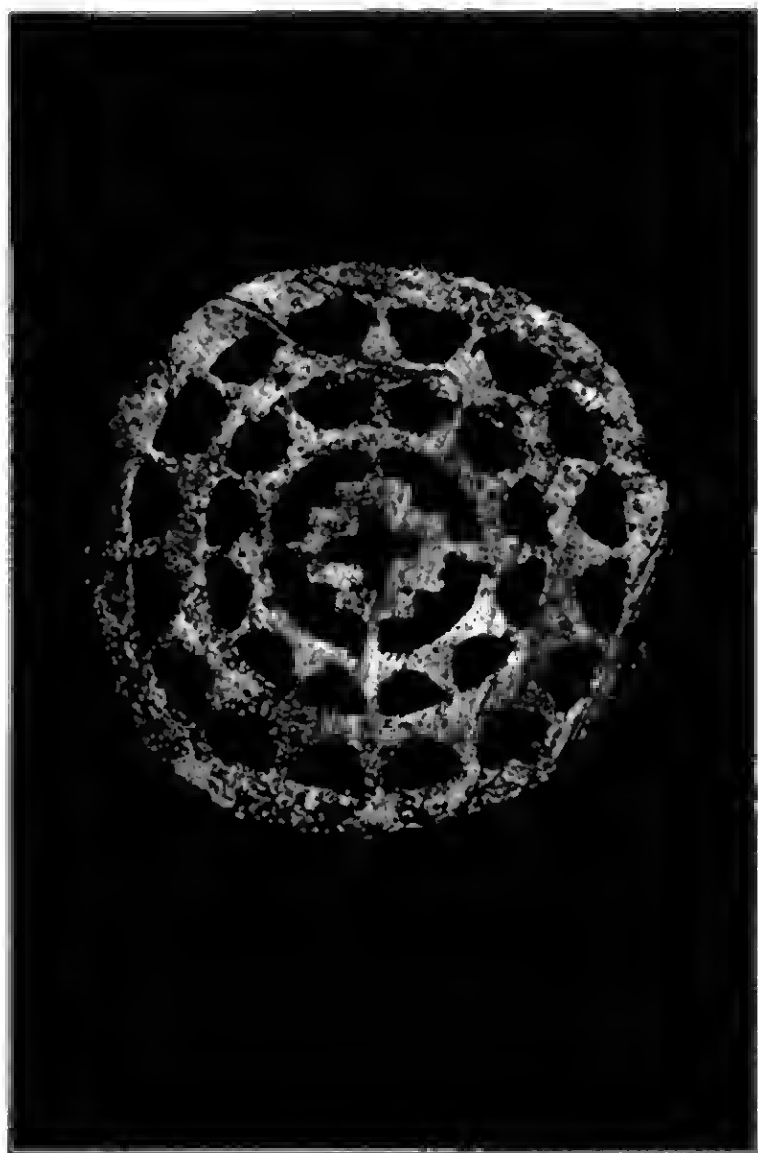
Miscellaneous bone objects.



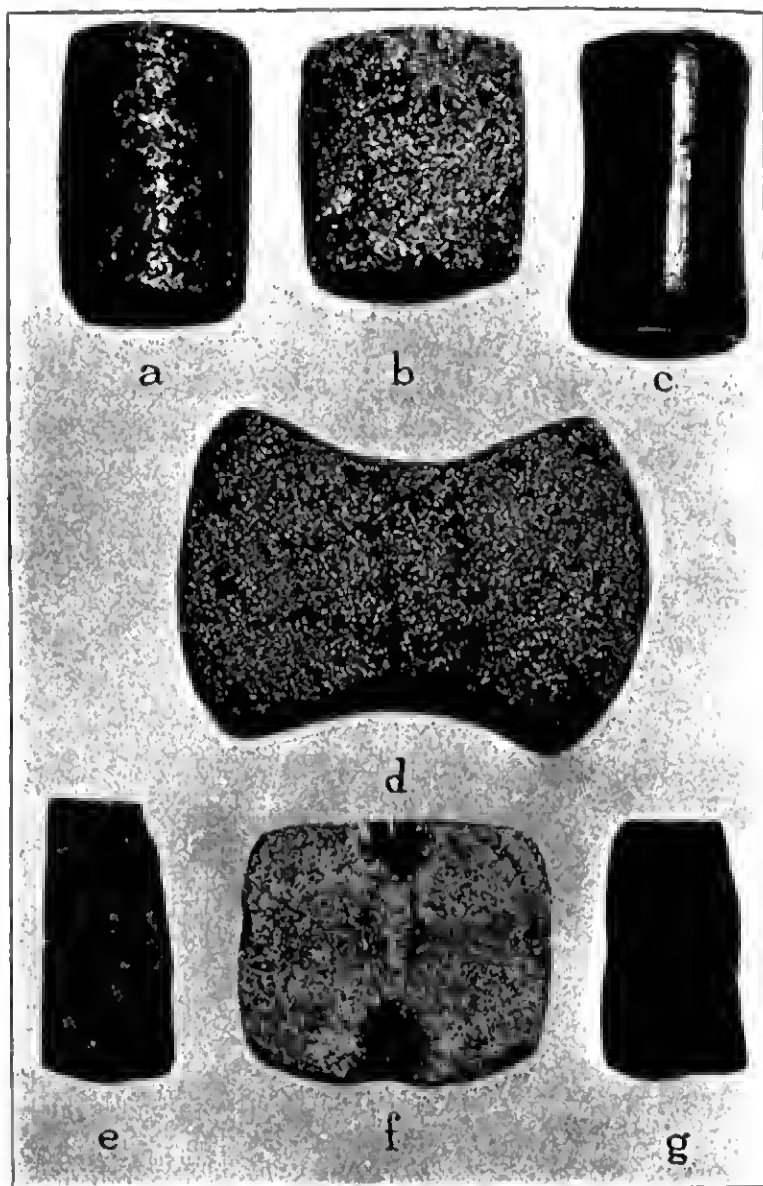
Shell beads: a, found with Skeletons 69 and 70; b, with Skeleton 13; c, with Skeleton 37.



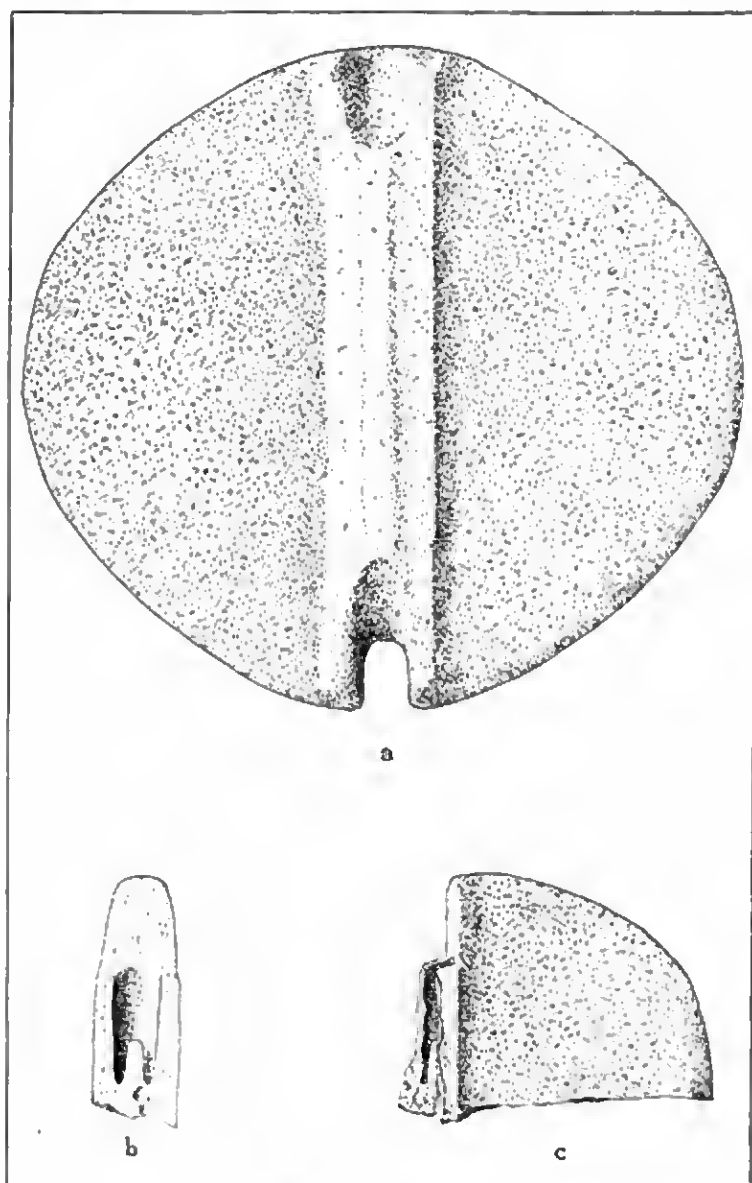
Shell ornaments: a, found with Burial C4; b, with C6; c, with C7; d, with C8;
e, with Skeleton 19; f, g, with Skeleton 32.



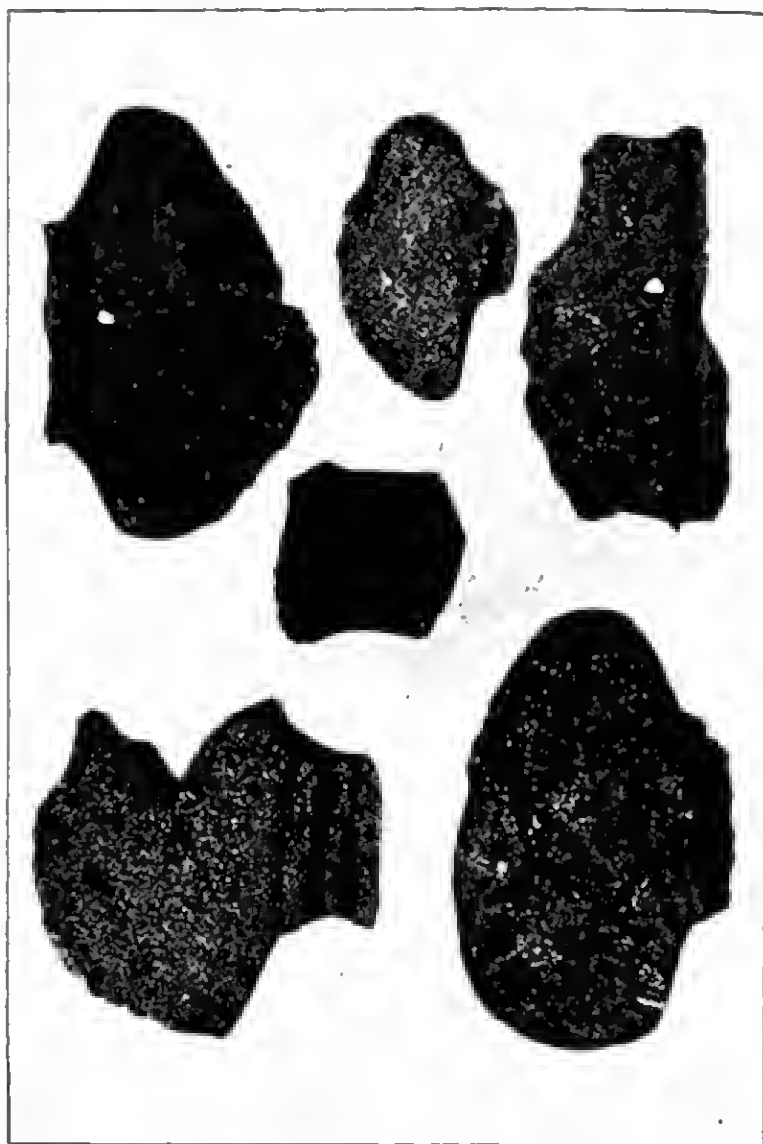
Shell gorget found with Skeleton 69.



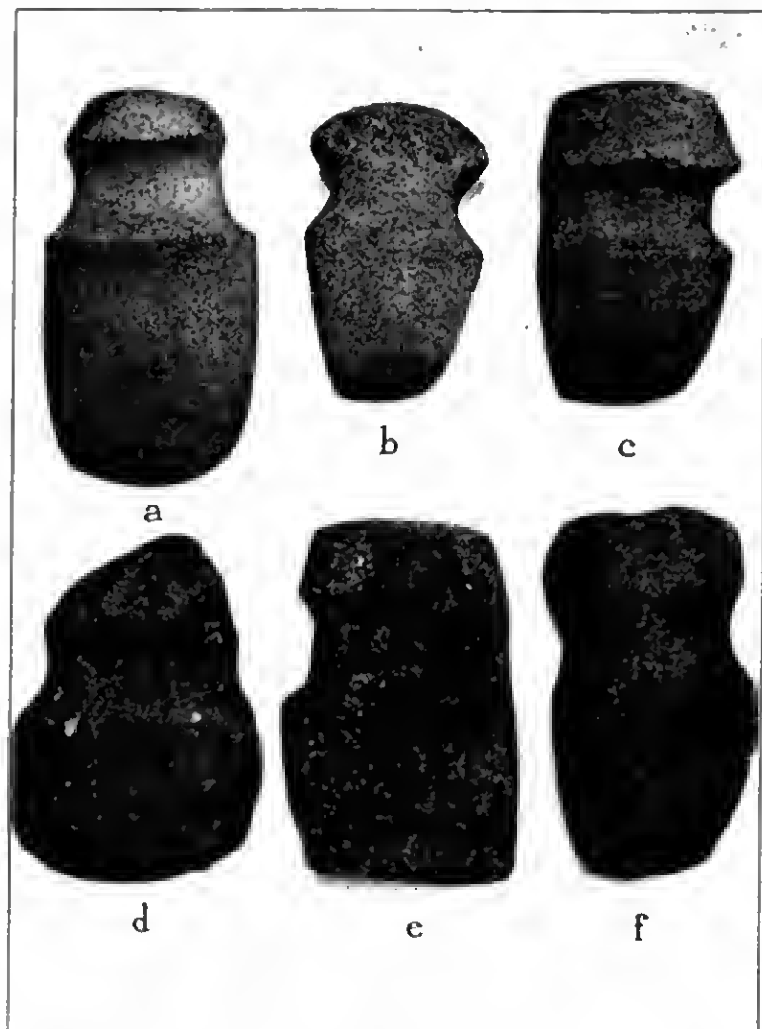
Banner stones.



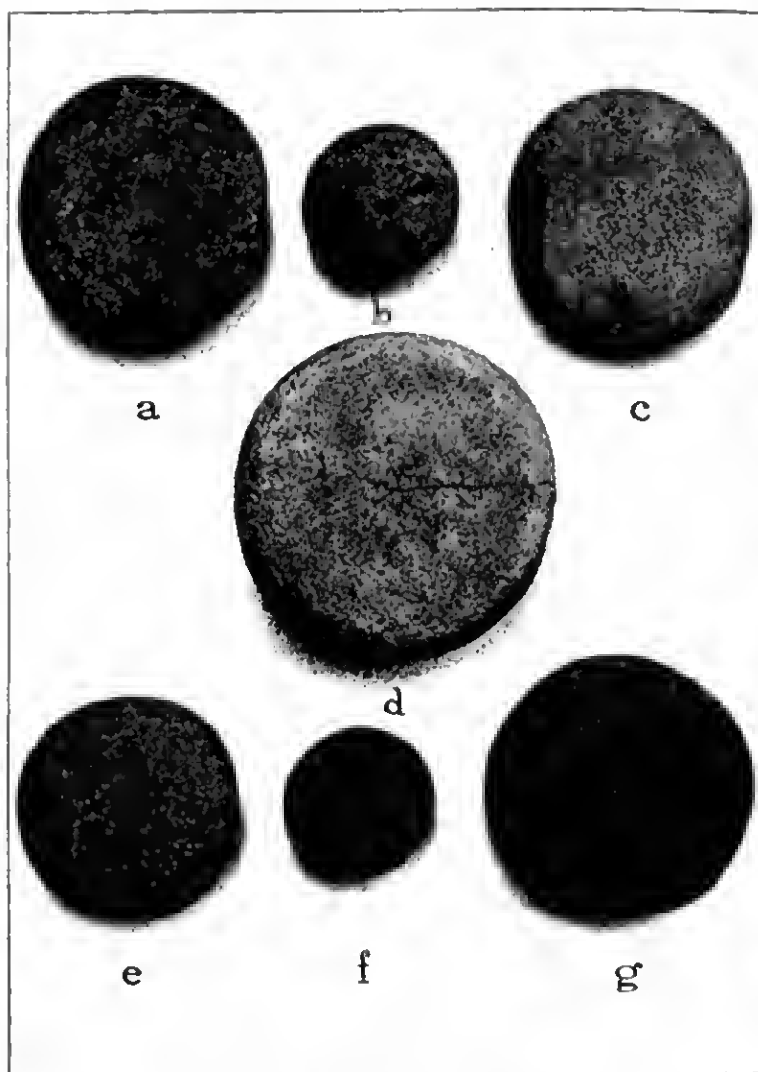
Unfinished banner stones.



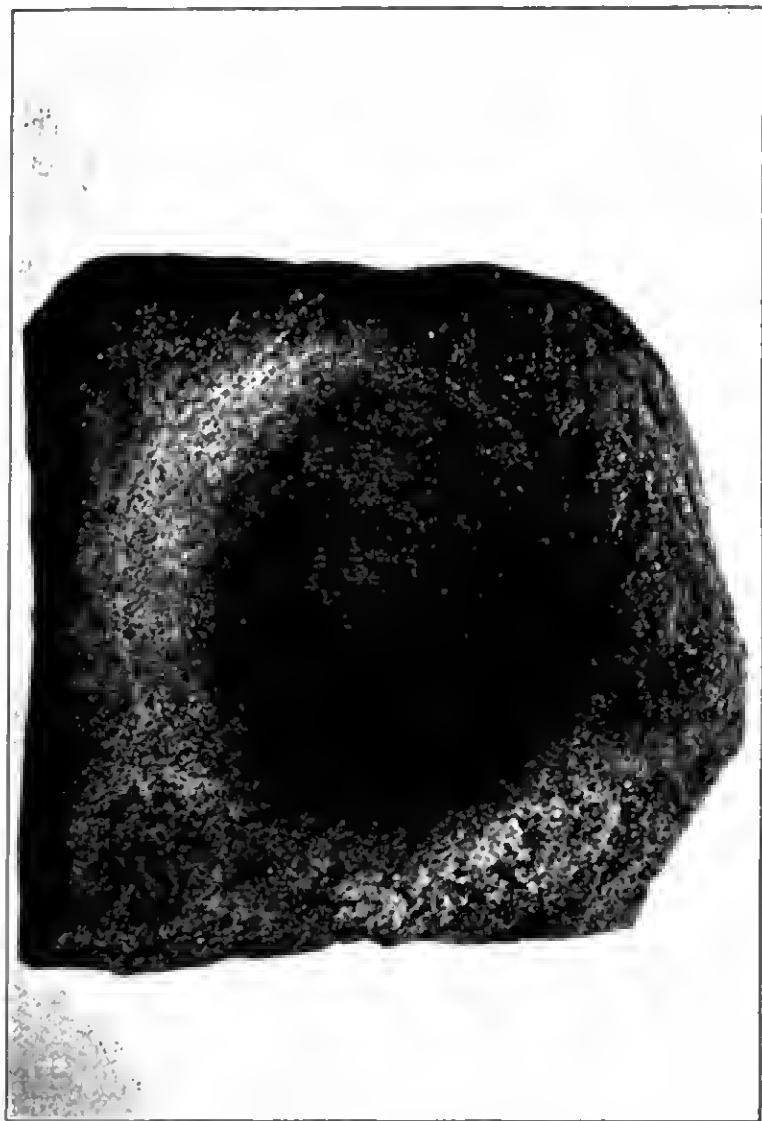
Fragments of winged banner stones.



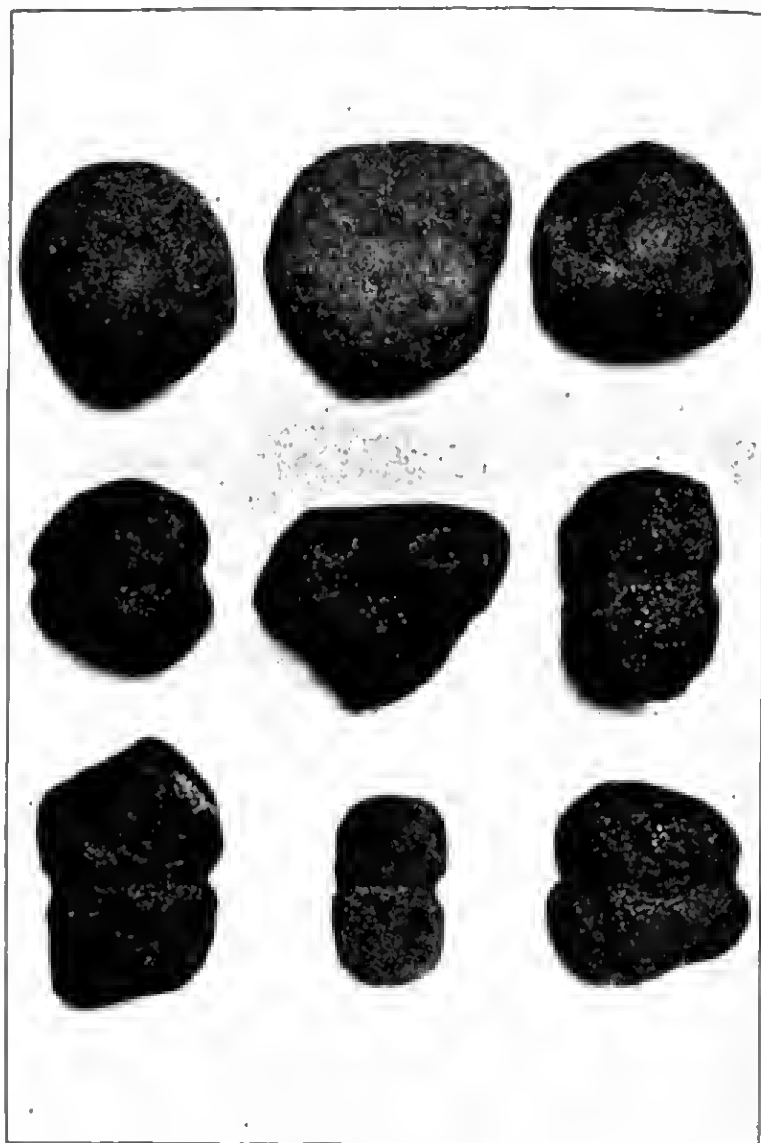
Grooved area.



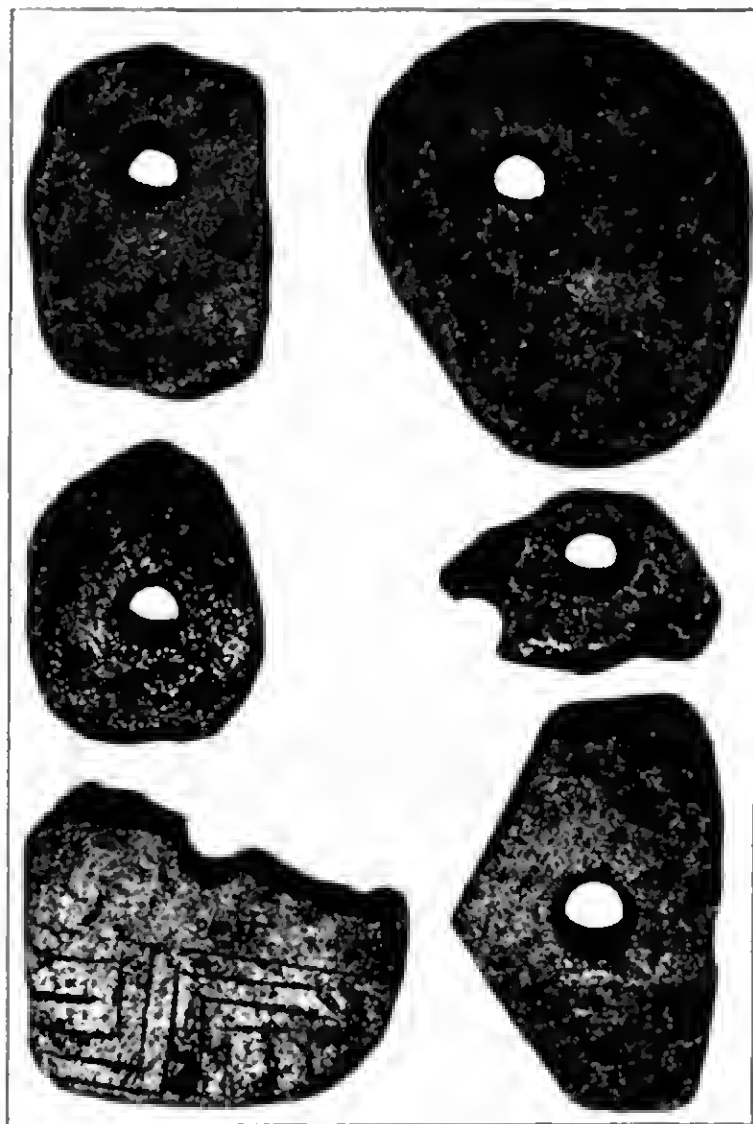
a, c, d, e, and g, discoidal stones; b, f, round stones.



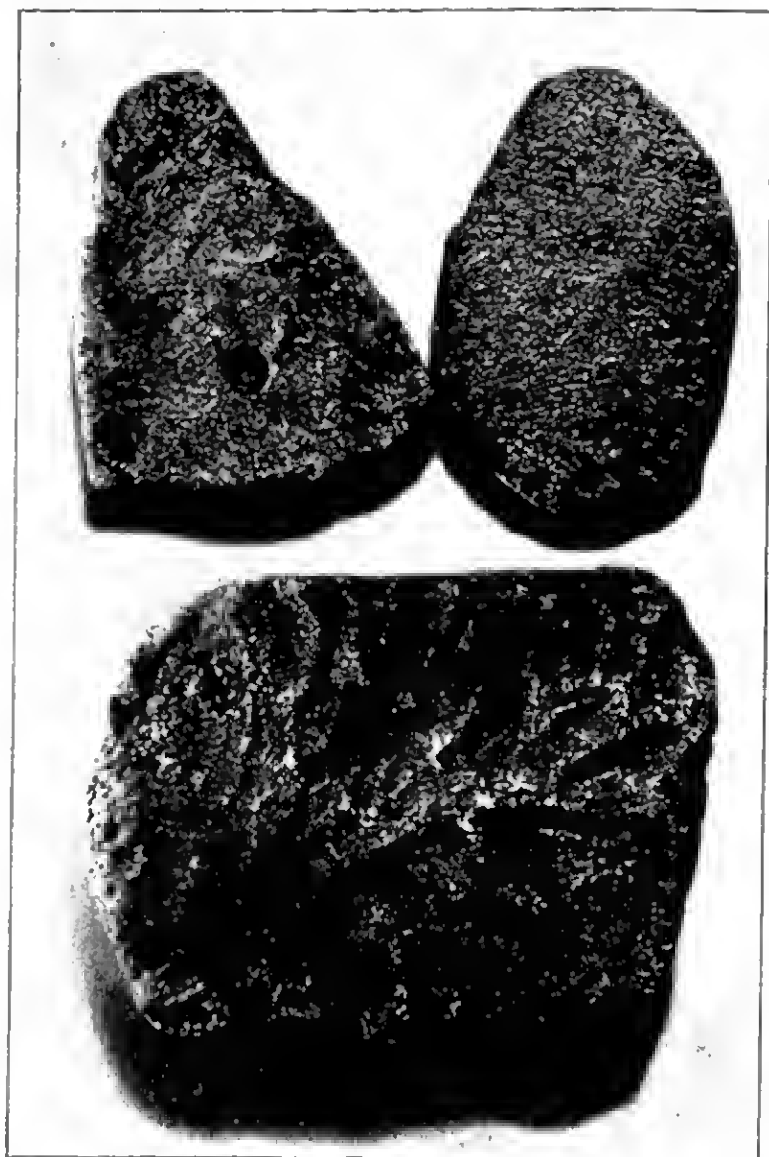
Mortar. Depression 5 inches in diameter.



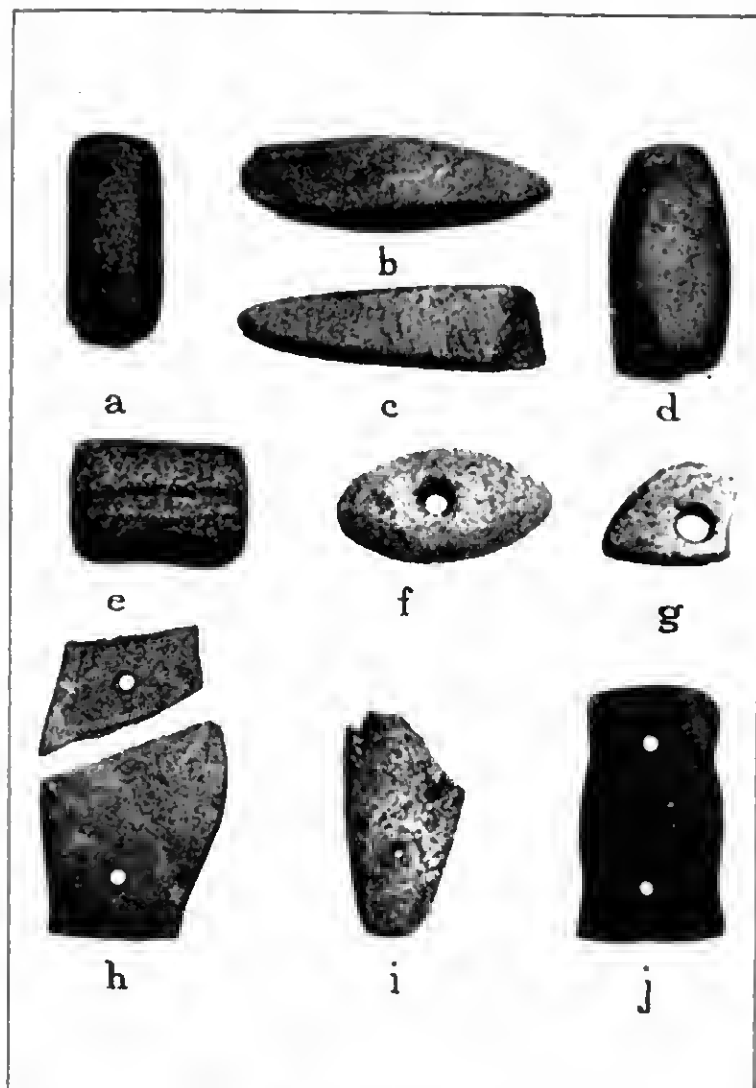
Fitted stones and grooved net sinkers.



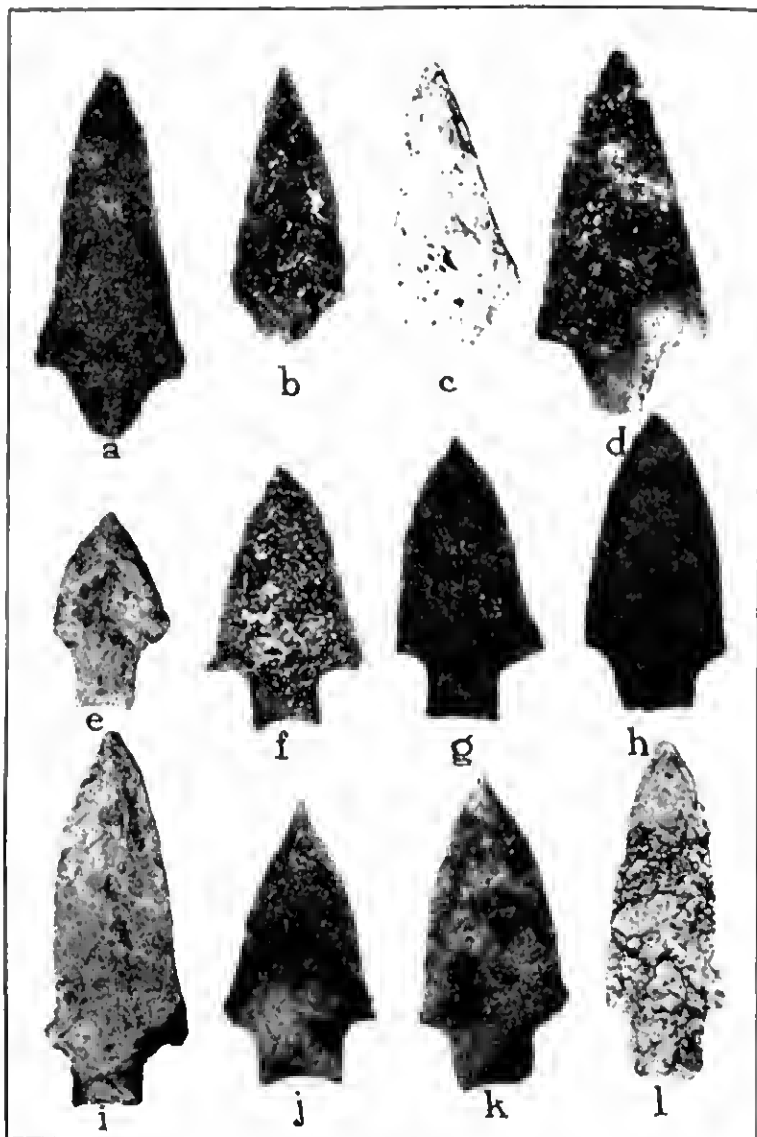
Soapstone perforated net sinkers.



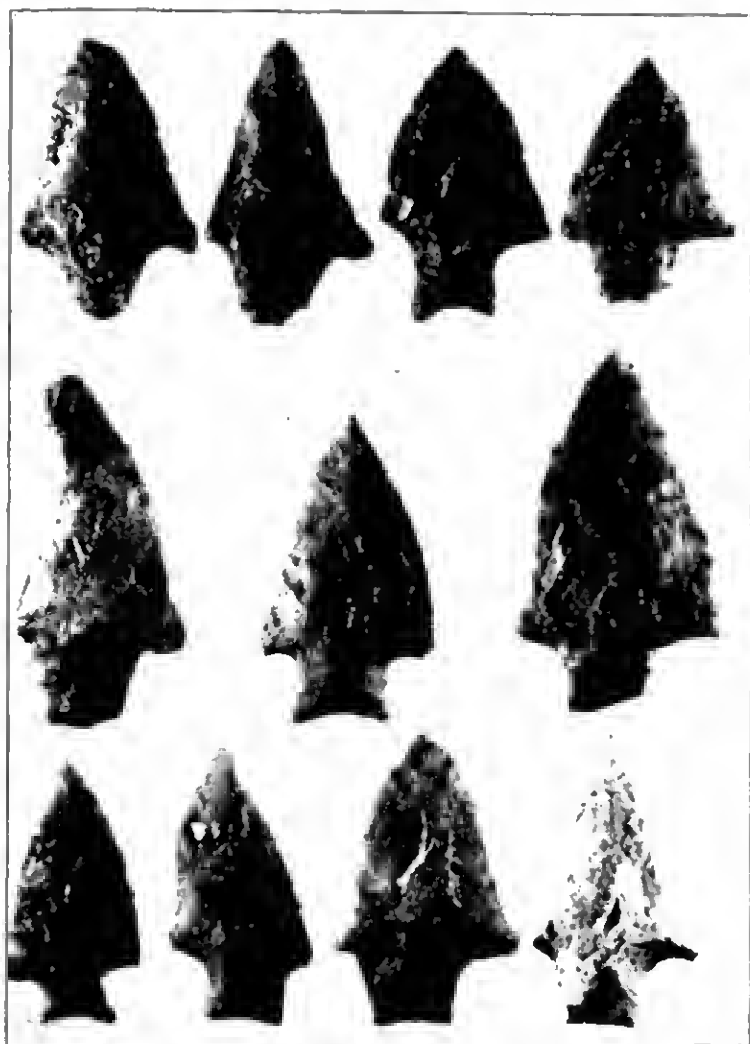
Unfinished soapstone objects.



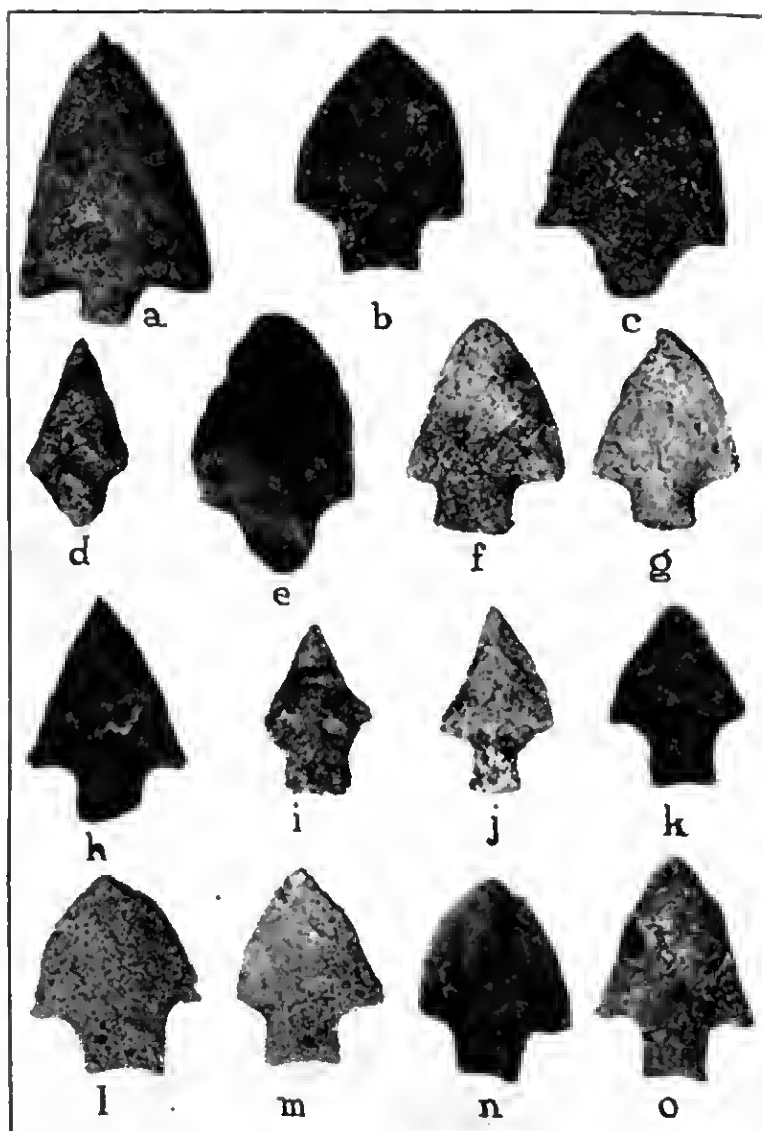
Miscellaneous stone objects.



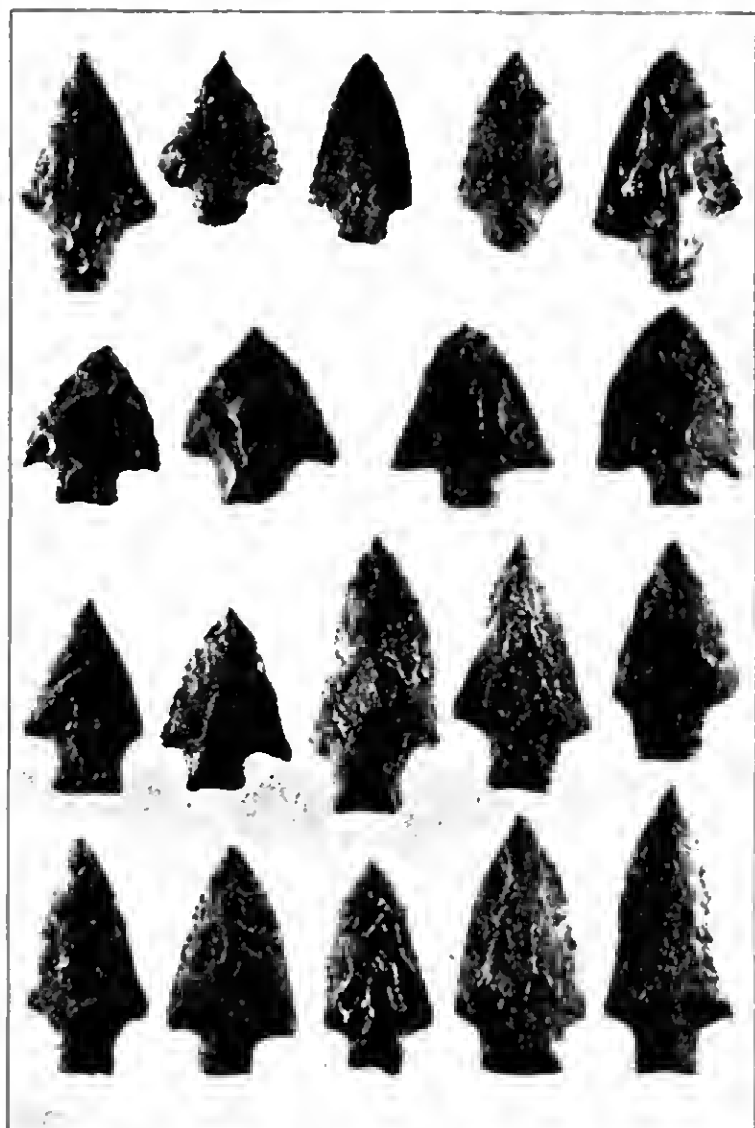
Chipped objects



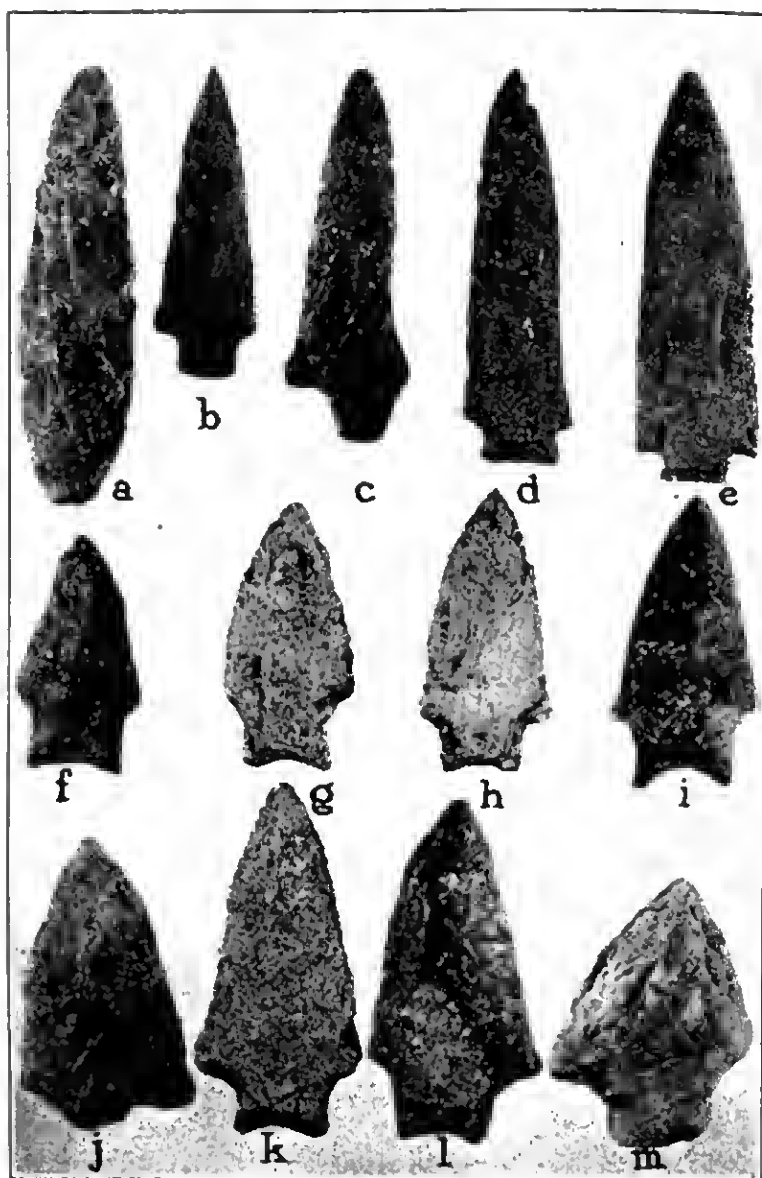
Chipped objects, showing "lopsided" tendency.



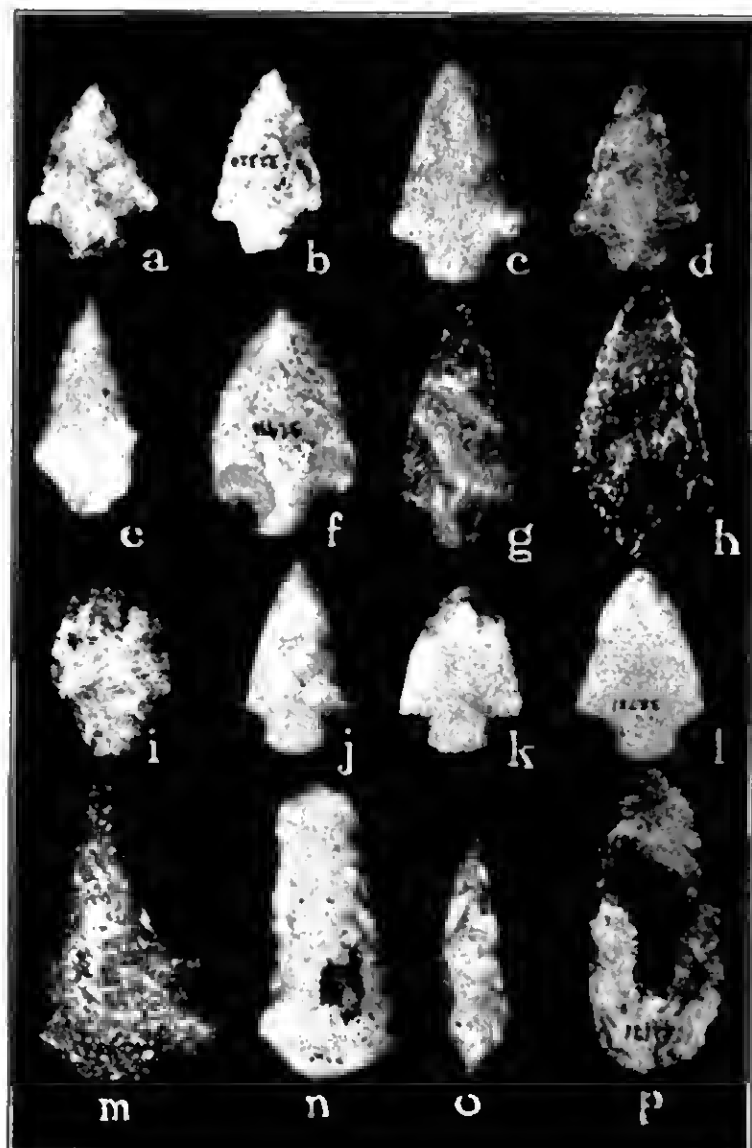
Chipped implements (Stalling's Island culture).



Chipped objects of slate (Stalling's Island culture).



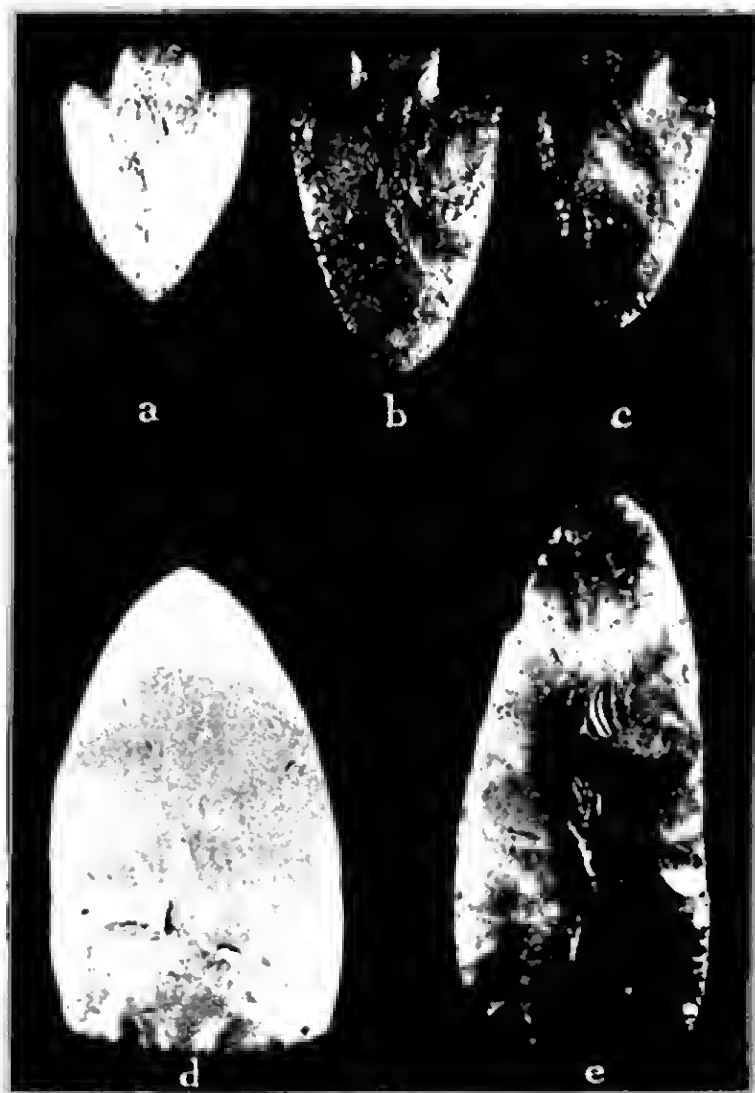
Large chipped objects of slate (Stalling's Island culture). 1 is 4 inches long.



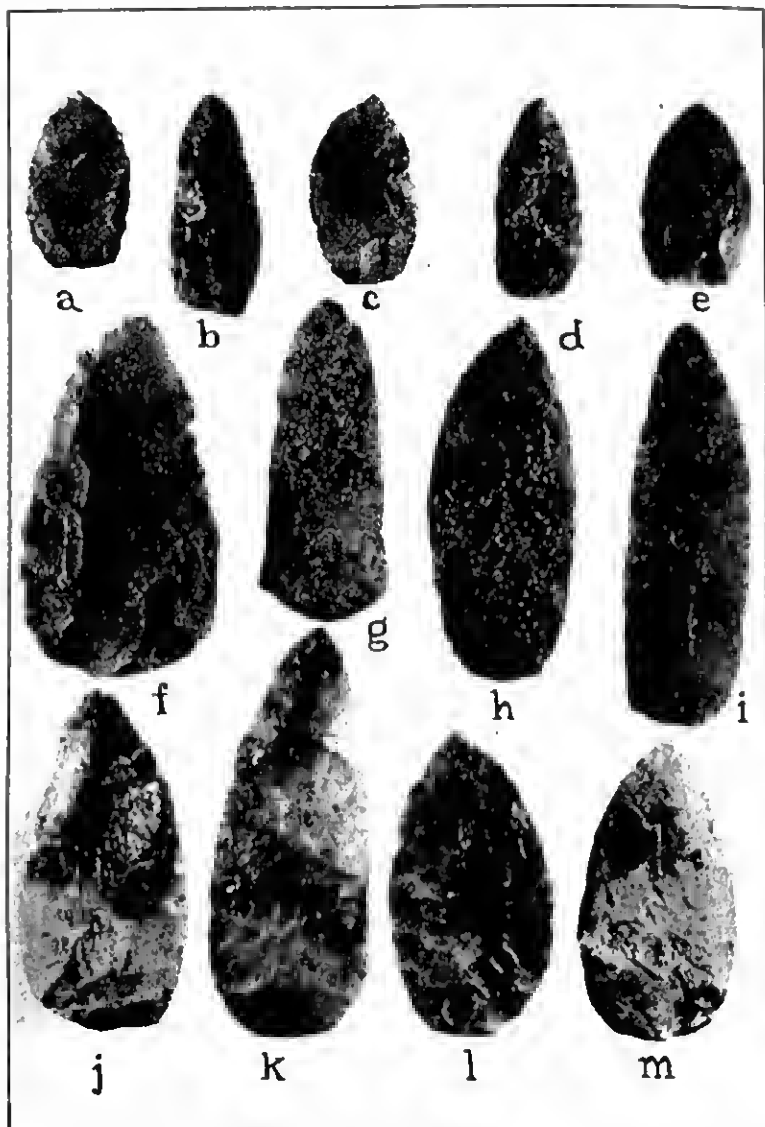
Clipped objects of quartz (Stalling's Island culture).



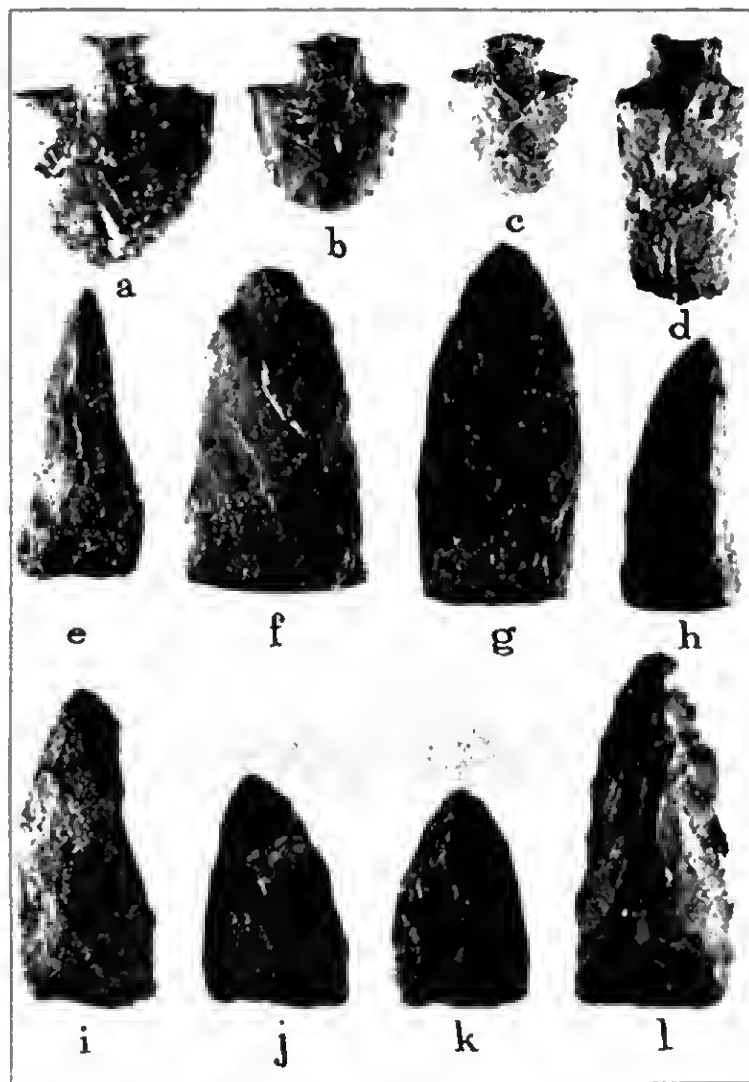
Blade of black flint found with Skeleton 13 (Plate 60, b).



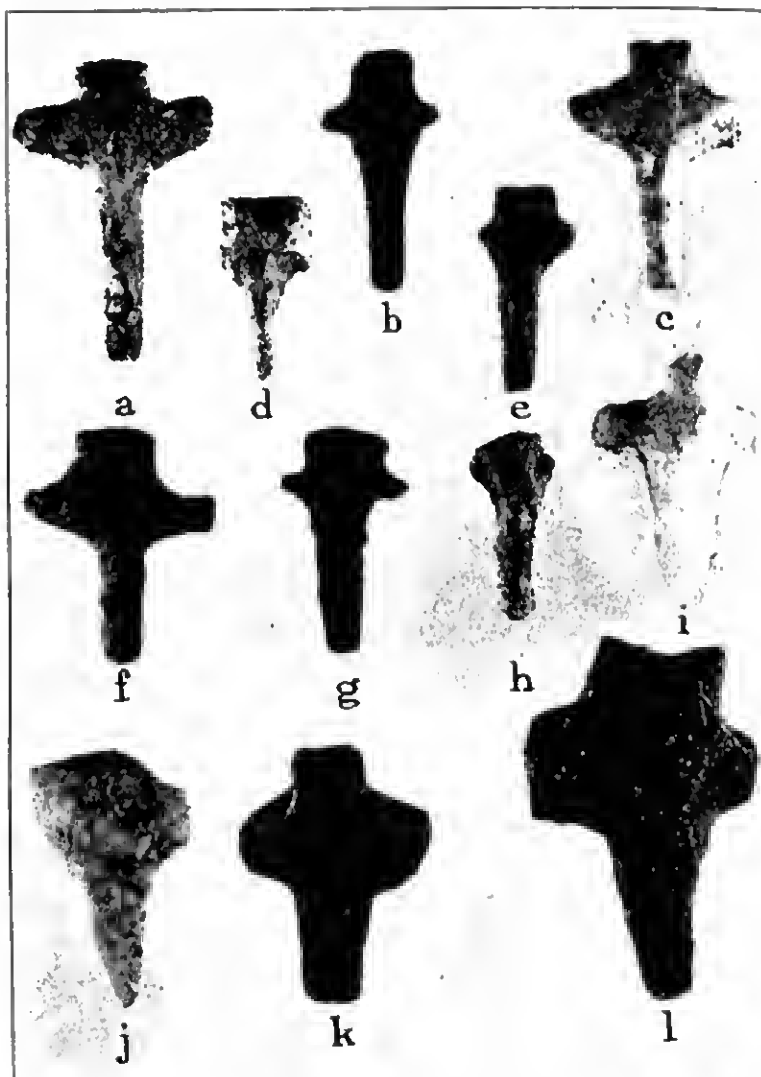
Chipped objects from Burials C4 and C6.



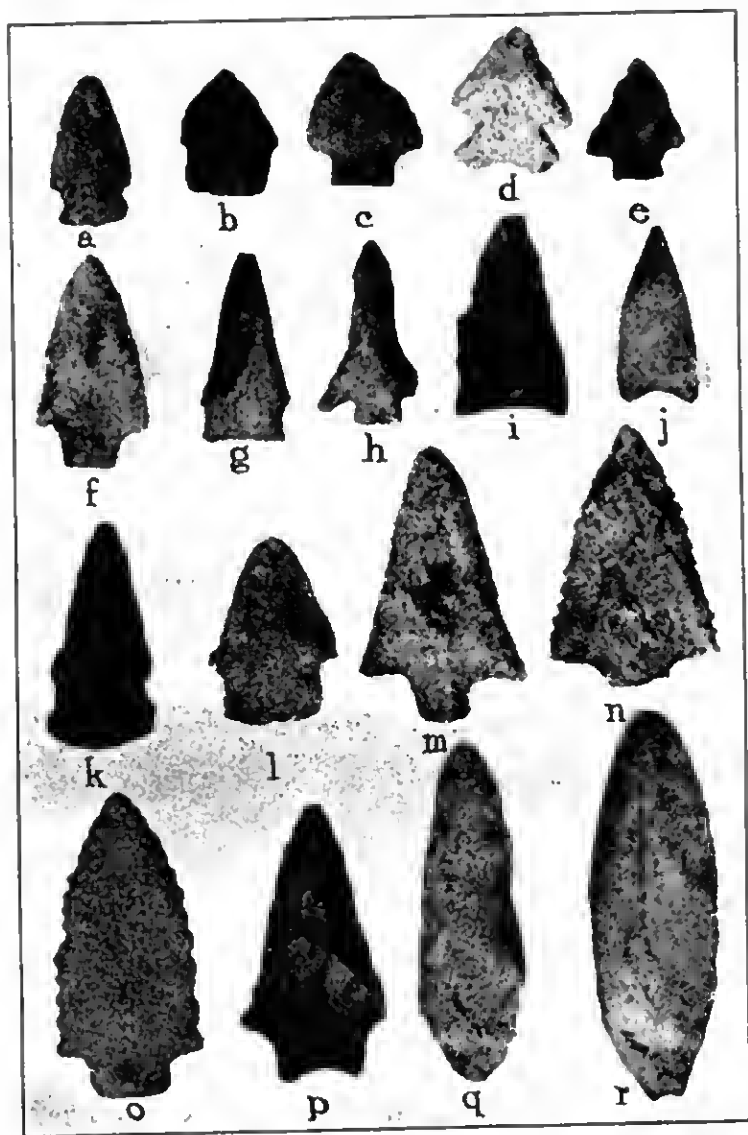
Chipped blades. k, Length 6 inches.



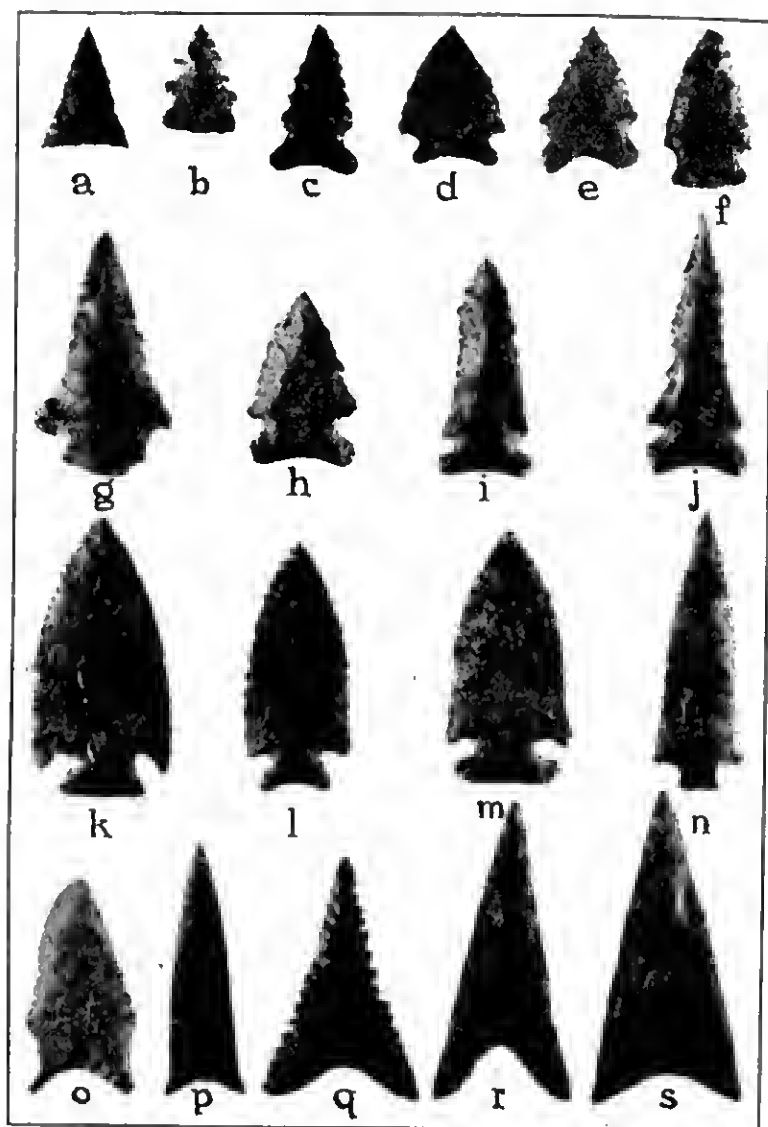
Chipped knives and scrapers (Stalling's Island culture).



Drills (Stalling's Island culture).



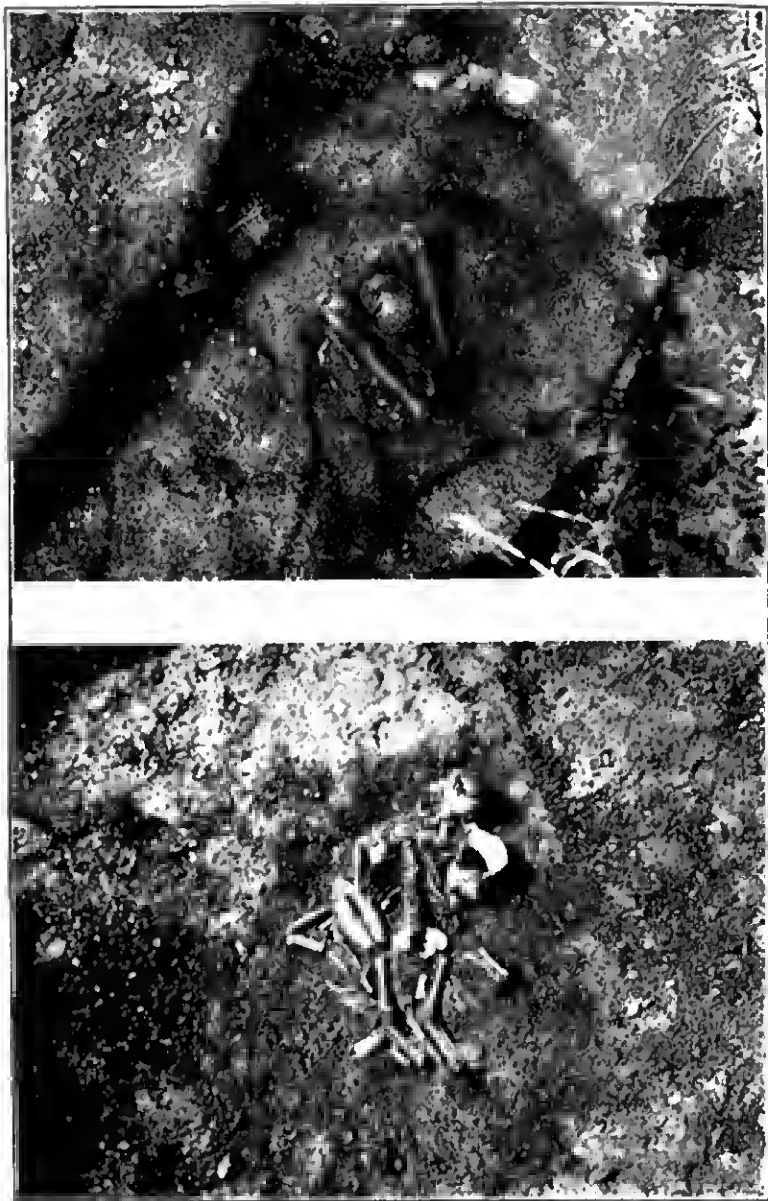
Chipped objects (later period).



Chipped objects typical of the Savannah River Valley not found at Stalling's Island.



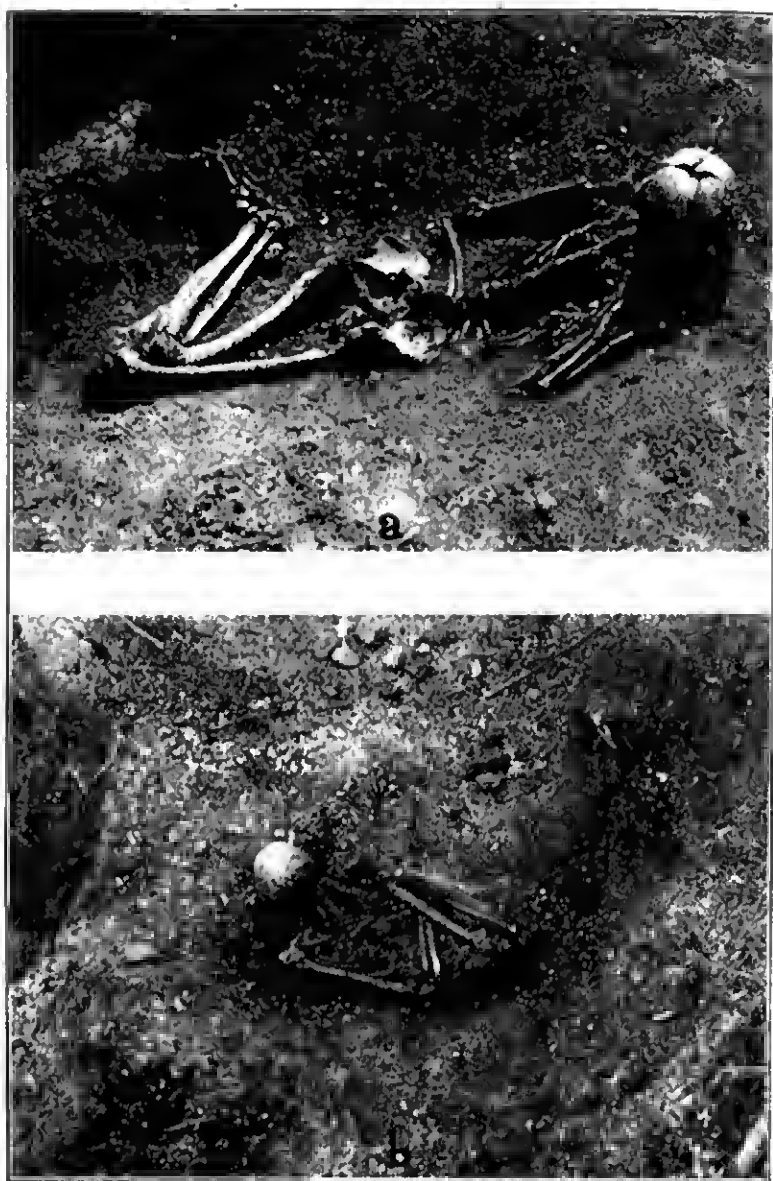
a. Skeletons 4 and 5. b. Skeleton 6



a, Skeleton 12. b, Skeleton 13.



a, Skeleton 16 (adult) and 17 (infant). b, Skeleton 18.



a. Skeleton 20. b. Skeleton 64.



a. External surface of trephined skull fragment showing beveling and marks of flint knife.
 b. Magnified view of edge of aperture, showing healing of outer table and beginning of cicatrization of the diploë.





(185)

CATALOGUED

14.5

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